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CHRONICLE OF THE WORLD HEALTH ORGANIZATION

This double number of the Chronicle *gives an account of the Fourth World Health Assembly, held in Geneva from 5 to 22 May 1952. The official proceedings of the Assembly, including decisions and resolutions, verbatim records of the plenary meetings, and minutes and reports of the main committees, will be published as* Official Records of the World Health Organization *No. 42.*

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SCHEDULE OF MEETINGS

28 July-4 August	**Expert Committee on Venereal Infections and Treponematoses, fourth session, London**
8-13 September	**Expert Committee on Influenza, first session, Geneva**
15-20 September	**Expert Committee on Public-Health Administration, second session, Geneva**
22-27 September	**Expert Committee on Leprosy, first session, Geneva**
22-27 September	**Expert Committee on Tuberculosis, sixth session, Geneva**
29 September-4 October	**Expert Committee on Mental Health, third session, Geneva**
4-10 October	**Expert Committee on Bilharziasis, first session, Porto Rico**
13-18 October	**FAO/WHO Joint Committee on Brucellosis, second session, Florence**
20-25 October	**Expert Committee on Biological Standardization, sixth session, Geneva**

I

WORK OF THE FIFTH WORLD HEALTH ASSEMBLY

FIFTH WORLD HEALTH ASSEMBLY

The Fifth World Health Assembly opened at Geneva on 5 May 1952.

In his opening address, Dr. L. A. Scheele, President of the Fourth World Health Assembly, drew up a balance sheet for the four years which had just elapsed—the first four years of the World Health Organization. It has now been proved that nations can work together on common problems without losing any of their national sovereignty : the various Members of WHO know how to collaborate unselfishly; the countries of the whole world realize that they must all contribute towards the improvement of health and that a permanent world organization is indispensable; most of them have faith in WHO.

Dr. Scheele then referred to the rapidly swelling stream of medical discoveries which will facilitate the efforts of WHO. Very important discoveries have also been made in agriculture, leading to the hope that one day all peoples may be adequately provided with the three elements essential for normal life : food, clothing, and shelter; for this is indeed the greatest problem with which scientists are confronted at the present time. But although recent discoveries may contribute in many ways to the success of WHO, the obstacles are still very numerous. Dr. Scheele indicated those which seemed to him the most formidable : the shortage of health personnel, obsolete methods of medical training, and the inadequate salaries paid to medical teachers and public-health staff :

" Shortages of health personnel continue to be a major deterrent to progress throughout the world.... All categories of health workers are in extremely short supply, but medically trained public-health administrators head the list. The worldwide lack of trained health personnel highlights the inescapable fact that individual countries, like WHO, will have to assign high priorities to the development of new local training facilities and the improvement of existing ones. There must be an increase in the total output of trained medical and public-health personnel.

" Many of the world's medical schools must improve their curricula and the quality of teaching. The teaching pattern of two or three decades ago, with great emphasis on lectures, has proved, in my opinion, obsolete. The modern school must increase the student's opportunities for practical experience. To accomplish this enrichment of the programme, a drastic decrease in didactic instruction is in order.

" Another deterrent to improvement in the quality of teaching is the very low salaries of medical teachers in many countries. Too many members of medical faculties cannot give full time and attention to the vital task of teaching because, in order to obtain an adequate income, they are obliged to carry on active private practice along with their teaching jobs. Officials of national health and education agencies must take active steps to improve salary scales in schools of medicine, public health, and related professions.

" Medical schools need better textbooks, and more basic texts should be written in the languages of the countries concerned. Medical school libraries should be given more attention."

Dr. Scheele stressed the fact that if these obstacles are not rapidly overcome, WHO will have to give up the attempt to extend its technical assistance programmes, and many countries will be unable to carry out the health improvements they have in mind.

Collaboration at the International Level

The first plenary meetings were devoted to the addresses given by the representatives of several international organizations : the United Nations, the United Nations Educational, Scientific and Cultural Organization (UNESCO), the World Meteorological Organization (WMO), and the Food and Agriculture Organization (FAO). These organizations were unanimous in proclaiming their desire for co-operation with WHO and in demonstrating the need for such co-operation.

Mr. Gunnar Myrdal, Executive Secretary of the Economic Commission for Europe and representative of the Secretary-General of the United Nations, spoke of the outstanding position occupied by WHO in the great United Nations family and mentioned the three features which, in the opinion of the Secretary-General, are characteristic of WHO.

" The Secretary-General... has been deeply impressed, particularly by three things. First, the way in which you have followed in the path broken by the Health Organization of the League of Nations and extended the work begun there, both in scope and in depth. By " in depth " I mean the undertaking of operational tasks in clearly defined regions of the world through regional offices, from which field missions and services radiate. In the second place, WHO has pioneered in the field of technical assistance. Its concepts of technical assistance and its early experience have contributed mightily to the successful development of technical assistance in other fields. The third fact, which impresses all of us who know your work, is the constructive contribution of the World Health Organization to the progressive creation of a more rational and fruitful co-operation among the various specialized agencies and the United Nations."

Mr. Torres Bodet, Director-General of UNESCO, observed that the physical interdependence of the peoples of the world is now universally recognized and that no progress worthy of the name is possible without collective international action :

" Whether we like it or not we live on a world scale; problems of sickness, ignorance, and hunger call for worldwide solutions. We can say where is the gate of a town, the frontier of a State, and what lines trace out the profile of a continent. But who could show on the map where the realm of tuberculosis begins or where the empire of illiteracy ends ? Evils merge into one another. Just as the proximity of a sick person is a danger to the healthy, so the very existence of the ignorant and the starving is a disgrace to those who eat their fill and to those who enjoy the benefits of an education to which millions of their brethren have no access. And this disgrace is not without its dangers.... Progress cannot be other than collective if it is not to bear within it the seeds of its own destruction."

Mr. Torres Bodet then referred to the San Francisco Charter and the Universal Declaration of Human Rights, stressing that " the right to food,

health, education, and the right to share the cultural and scientific heritage of mankind are but complementary aspects of a single eternal right—the right to live a decent life ". The very concept of " health ", as it is defined in the WHO Constitution, goes beyond mere physical health and includes mental health, which also comes within the field of UNESCO. Mr. Torres Bodet then enumerated some of the points where the activities of WHO and of UNESCO met :

International co-operation between scientists. This is one of the fundamental preoccupations of UNESCO, as it is of WHO.

Child welfare. The experts of WHO and of UNESCO met in September 1951 to examine problems relating to the mental health of children. Other joint conferences are being planned.

Fundamental education. A campaign has been undertaken by UNESCO in which the teaching of hygiene plays a part and which has called for the collaboration of WHO.

Mr. Torres Bodet's speech made it clear that the specialized agencies have a common aim : to serve the individual as a whole and to prepare him for " the responsibilities which await him in a world of ever-increasing possibilities ".

" Not long ago I was present in Florence at the celebration of the fifth centenary of the birth of Leonardo da Vinci. Going through the " Notebooks " of the artist, who was also an anatomist, an engineer, and a philosopher, I found a definition of medicine which foreshadows to some extent that given in your Constitution : ' Medicine is the remedy applied to conflicting elements; disease is the discord of elements innate in the living body '. This brief definition shows in terms of peace and war the problem of disease and health. What is true of the individual is also true of the community in which he lives. We cannot separate our efforts from this combined movement to restore and consolidate a general equilibrium. May we, by close and continuous co-ordination, make of the United Nations and its agencies ' the remedy applied to conflicting elements ', that is to say an instrument for the achievement of a just and prosperous peace which would be nothing less than the health of the world."

The Secretary-General of the World Meteorological Organization, Mr. Swoboda, also observed that WHO and WMO have common problems to solve; the health of man depends largely on his environment, just as the salubrity of a place depends on climatic conditions. There is a relatively new science, bioclimatology or meteorobiology, which studies the influence of climate on health; WHO and WMO can collaborate in this research and in the practical application of the results already obtained.

The speech by Sir Herbert Broadley, Deputy Director-General of the Food and Agriculture Organization, dealt with the problems raised by increasing population. The millions protected by WHO from fatal diseases become additional millions of mouths for FAO to feed. Sir Herbert Broadley referred to the two possible solutions : family planning or increased food production. Each of these solutions, neither of which can be attained in

the immediate future, had its supporters. The position was very serious, and the countries of western Europe might be reduced to famine if the countries exporting foodstuffs were to consume all that they produced. It was indeed vitally important for WHO and FAO to work closely together.

" The more successful you are in reaching your goal, the more difficult FAO's task becomes... The span of human life is being extended. Infant mortality has immensely fallen and thousands upon thousands of human beings are coming out of the shadow of disease, misery, and incapacity into the sunshine of healthy energetic lives. But more mouths demand more food. Healthy people eat more than do the diseased and incapacitated, and in a lifetime of 70 years one individual consumes much more food than does a man or woman who is doomed to die at 30, 40, or 50; and this is the measure of FAO's growing task. Some people have said—perhaps we have repeated it—that WHO's successes are FAO's greatest enemy. We must recognize that at the moment the world is just not responding to FAO's challenge. It is not producing sufficient food even to maintain for its increasing population the amount which the fewer, shorter-lived, less healthy millions had for each individual before the war...

" Where birth-rates continue to advance, as is the case in many countries... where death-rates and human mortality are being halved, where the expectation of life is gaining another five, ten, fifteen years, we cannot just sit back and let nature take its course. If we do, nature's course will be a very desperate one...

" These international conferences and Assemblies are the places where we should be able to view these problems in their right perspective. Less today than ever before is it possible for individuals and nations to live for themselves alone. And that is why, Mr. Chairman, I am sure that at this important Assembly you will be soberly considering the problems which your own successes are creating."

Elections

The Hon. Juan Salcedo, Secretary of Health, Philippines, was unanimously elected President of the Fifth World Health Assembly.

The following delegates were elected as Vice-Presidents :

Dr. A. Bellerive (Haiti)
Dr. J. N. Togba (Liberia)
Dr. P. Vollenweider (Switzerland)

Dr. N. Romero (Chile) was elected Chairman of the Committee on Programme and Budget and Sir Arcot Mudaliar (India) Chairman of the Committee on Administration, Finance and Legal Matters.

Presidential Address

In his presidential address, Dr. Salcedo mentioned certain problems which, in his Region and doubtless in the others too, may jeopardize, if neglected, the success of the health programmes. In the first place, there is the publicity given by the lay press to new, so-called " wonder drugs ".

" There has been too frequent use of the word ' wonder ' which, in view of the still experimental nature of some of these products, may be misleading. The consequent effect on public opinion and public health by hasty and even indiscriminate publicity is obviously harmful to populations throughout the world. As a result, inadequate treat-

ment is being attempted, symptoms are masked, resistance is created to future measures and the basic factors of disease control become ignored by the public, gullible—or desperate—enough to want a speedy cure. Such a situation is obviously contrary to the public interest, and it is my wish to draw the attention of the Fifth World Health Assembly to this increasingly serious matter. It may be that control, on the part of national health administrations everywhere, could ensure that premature publication is not made of future alleged cures, so that the public, when informed appropriately and at the proper time, would have sound faith in any drug announced by its own government as having been proved truly effective. Again, it is suggested that advertisements or statements on new ' wonder ' and other drugs be limited to scientific journals of the medical and allied professions." [1]

The other problems which Dr. Salcedo wished briefly to mention were the following : first, the health programmes of WHO can succeed only if collective interest and participation is ensured; it is therefore essential to inform the public and to give it an active part to play in these programmes; furthermore, the interest and support of qualified physicians must be obtained. However, physicians prefer to engage in private practice, rather than to take part in public-health or preventive medical activities for the very simple reason that the latter are very poorly paid and their importance is not always appreciated. Finally, the expenses to be borne by governments in the technical assistance programmes are sometimes too high for them.

All these remarks apply in particular to the underdeveloped countries, but Dr. Salcedo considered his election to the presidency as a sign that WHO wishes to devote increasingly active and enlightened attention to these countries.

The discussions of the Fifth World Health Assembly, as will be seen later, stressed direct assistance to these countries through priorities for fellowships, the lightening of financial burdens, and the intensification of efforts for establishing local health services; even in the technical discussions, the main topic was local health areas and health protection in underdeveloped countries.

Presentation of the Annual Report for 1951

The Director-General opened the discussion by presenting his annual report on the work of WHO for 1951.[2] He considered the most outstanding fact emerging from the report to be that WHO has now the experience and techniques enabling it to give to each country the precise type of assistance most suitable for raising its health level. The kind of assistance given must naturally correspond to the degree of development, the economic resources, the customs and civilization of the inhabitants.

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[1] Following the President's statement, the Fifth Health Assembly instructed the Director-General to draw the attention of Member Governments to the desirability of adopting measures to guard against the dangers of premature publicity regarding new drugs.

[2] *Off. Rec. World Hlth Org.* **38**. See also *Chron. World Hlth Org.* 1952, **6**, 113.

" The World Health Organization is determined to avoid the mistakes of the past. Too often countries requesting assistance have been the object of well-meaning but disastrous attempts to superimpose on the local culture foreign patterns which, lacking the necessary foundations, are bound to result in friction, misunderstanding and ultimate failure. In health work, as in all other fields of technical assistance, there can be no question of simply transplanting techniques from one place to another."

The report also brought out the increasing importance given to professional education and training : 665 fellowships were awarded in 1951, and 26 symposia helped in the exchange of scientific information. The two main events of 1951 were : the adoption of the International Sanitary Regulations and the publication of the first volume of the *Pharmacopoea Internationalis*. Finally, the Director-General briefly indicated how the United Nations technical assistance programme could be further improved : first, by making full use of the Administrative Committee on Co-ordination and of the Technical Assistance Board; next, by reducing certain obligations which weigh somewhat too heavily on governments and prevent them from participating in the programmes as much as they would like; and, finally, by giving the maximum help to the so-called " underdeveloped " countries in organizing and co-ordinating their technical assistance work.

Presentation of the Report of the Executive Board

Reporting to the Assembly on the eighth and ninth sessions of the Executive Board, which were held under his chairmanship,[3] Professor J. Parisot, Dean of the Medical Faculty of the University of Nancy, said that one of the most important events had been the completion of WHO's regional structure, now comprising six regional organizations with their committees and offices. Co-ordination of international health work had also been considered by the Board, as well as various other aspects of the technical assistance programme, particularly regarding the supplies to be furnished by the participating countries. Professor Parisot stressed that the Board felt these obligations to be too heavy for many countries and that they should be lightened.

In conclusion, he hoped that this great endeavour to attain social and physical well-being would be a source of security and peace for the whole of mankind.

General Discussion

The delegates of the following fifteen countries spoke during the discussion : Austria, Ceylon, France, Hashemite Kingdom of the Jordan, India, Iran, Israel, Italy, Japan, Lebanon, Saudi Arabia, Thailand, United Kingdom of Great Britain and Northern Ireland, Viet Nam, and Yugoslavia.

[3] *Off. Rec. World Hlth Org.* **36** ; **40**

In general, the activities of WHO during 1951 were warmly praised : the delegates recognized " the vigour, enthusiasm and sustained energy " which marked the implementation of projects in the various countries. It may be of interest to cite the opinion of Japan, which has been a Member of WHO for hardly a year :

" The year with this Organization has been most inspiring as well as most fruitful for all of us who are striving hard for the better health of the people in our country... The accomplishments that were attained in the field of public health in my country during the year 1951, such as the remarkable decrease in deaths from tuberculosis, further prolongation of life expectancy for men and women, and the sharp decline in infant mortality, might not have resulted without the moral support and spiritual inspiration of this Organization."

The delegates observed that the countries of the world were becoming more and more conscious of their right to health and realized that to fight against disease contributed towards overcoming social injustice. Two important events for which 1951 was noteworthy were the adoption of the International Sanitary Regulations and the publication of the first volume of the *Pharmacopoea Internationalis*, " real instruments of international co-operation beyond all politics, solely intended to promote health all over the world ". However, the essential task of WHO was to progress continuously and regularly, always to strike a balance between its activities and its resources, and to reject any attempt to make health a political instrument; they were glad to note the already apparent signs of WHO's maturity : fuller collaboration with the other international agencies, a tendency to judicious self-criticism, and, above all, the decentralization of authority.

The achievement of decentralization and regional organization was referred to by all the delegates, who considered it as a turning-point in the history of WHO. From now on it is for each nation and each country to establish priorities for the problems to be solved on its territory. But the general guiding lines will remain the same, the directives will always come from headquarters; it will no longer be necessary to define the precise relationship between headquarters and the regional offices and to supervise the general direction taken by the latter. The transfer of the work of headquarters to the regional offices can only take place successfully if the regional committees work in close co-operation.

For this reason, several delegates who took part in the general discussion felt that the Health Assemblies should continue to meet every year. Their arguments, as well as arguments submitted in favour of biennial assemblies, are summarized on page 178 under the heading " Membership and Organization ".

Many delegates mentioned the meetings and reports of the expert committees : some felt that certain committees were duplicating the work of specialized private or national bodies and that, consequently, the dissolu-

tion of such committees would be an excellent way of economizing; others, on the contrary, stressed " the enormous benefits derived from the international conferences of experts convened by WHO and whose reports are published in the *World Health Organization: Technical Report Series* ". The delegate of Ceylon felt that :

" . . . The expert committee reports should rank very high in the work of our Organization. . . Their greatest virtue is that they are the product of a composite group and that we are therefore safeguarded from those individualistic tendencies to which experts are sometimes liable."

Other delegates stressed the importance of the proper choice of experts, the careful preparation of the meetings, and the need to insist that the general lines of the reports be more precise and more practical.

Some of the other points which were commented upon included : relations with non-governmental organizations, the fellowships programme, the training of auxiliary personnel, material assistance to countries and reducing the expenses incumbent upon governments, international centres, environmental sanitation, the rehabilitation of the physically handicapped, the rehabilitation of lepers, and, finally, population problems.[4]

Programme and Budget

" Continuity in the Organization's activities, co-ordination of those activities with the work of other international and national agencies, concentration of effort on the most pressing problems—these are the principles which have guided the drafting of WHO's programme and budget for 1953. The first of these—continuity—needs no emphasis, for the Organization's activities have become an organic whole maintained from year to year with only gradual modification and development; co-ordination becomes increasingly important with the ever closer co-operation between WHO and numerous other agencies which have responsibilities in health and welfare; and, finally, accumulating experience makes it possible to plan a surer and stronger concentration of effort than ever before."

These words, taken from the introduction by the Director-General to the volume containing the proposed programme and budget estimates for 1953,[5] indicate the main features of the programme adopted by the Fifth Health Assembly for the coming year.

As in former years, this programme includes a certain number of purely international activities.

Epidemiological services

The Organization will draw up from 1953 annual reports on the application of the International Sanitary Regulations adopted by the Fourth Health Assembly and entering into force on 1 October 1952. WHO

[4] See page 183.

[5] *Off. Rec. World Hlth Org.* 39, 1

will assist the countries in adapting their sanitary legislation to the new Regulations and in solving problems and disputes which may result from its application. A report on the rejections, reservations, and amendments to the International Sanitary Regulations was adopted by the Fifth Health Assembly. Out of the 89 countries concerned, only 25 presented reservations and only 4 submitted rejections. Out of a total number of 73 reservations, 35 were accepted in a spirit of international conciliation, although they complicate the Regulations. The Fifth Health Assembly requested the Committee on International Quarantine to receive all amendments proposed by governments with the aim of advising the Seventh Health Assembly, which will take the necessary decisions. Moreover, the Organization will draw up practical recommendations for the health protection of isolated communities and large-scale movements of population, for the salubrity of ports and airports, and for the control of diseases not dealt with in the Regulations. WHO will continue to circulate epidemiological information, to distribute its world telegraphic code *(Codepid)*, and to co-ordinate certain researches. In 1953, a special task of the Organization will be to evaluate the results of tests with dried smallpox vaccine and of studies on leprosy, rabies, and brucellosis.

Health statistics

WHO is compiling and circulating, as in the past, international morbidity and mortality statistics. Furthermore, the Organization will collect statistics on health personnel and on medical and public-health schools. It will continue to study the revision of the *Manual of the International Statistical Classification of Diseases, Injuries, and Causes of Death*,[6] which must be employed in all countries if it is desired to obtain comparable statistics, a desideratum for international health activities. With this aim the Organization is assisting governments to establish or improve their health-statistics services. This is not an easy task. Indeed, many underdeveloped countries will first have to succeed in registering births and deaths before dealing with morbidity statistics. In other, more developed, countries it is found that physicians help very little in drawing up the statistics; medical secrecy is one of the pretexts given by some physicians, but the fact is that they do not sufficiently appreciate the value of health statistics. Consequently, the Fifth Health Assembly called upon Member States to encourage the medical profession to collaborate fully in the reporting of morbidity and causes of death. One of the best methods would be to include in the syllabus of medical studies the part played by health statistics. But whatever the methods applied for the reporting of morbidity and causes of death, medical secrecy should be scrupulously safeguarded.

[6] World Health Organization (1948) *Manual of the International Statistical Classification of Diseases, Injuries, and Causes of Death*, Geneva, vol. 1

Therapeutic substances

The Organization will continue to work on biological standardization, with the aid of the National Institute for Medical Research, London. WHO's activities in this connexion are increasing with the growing number of new biological preparations, such as antibiotics and hormones. WHO is continuing its work on the *Pharmacopoea Internationalis* and its addenda, as well as studies and inquiries in connexion with addiction-producing drugs. The Organization is actively directing international studies on BCG. In 1953, these studies will consist mainly of laboratory research, methodical surveys of post-vaccinal allergy, and the study of the influence of certain factors on the activity of BCG.

Publications

By means of its documentation services, WHO will continue to circulate medical information of international importance.

Communicable-disease services

Despite the diversity and extent of these purely international services, the main task of WHO, as it emerges from the programme adopted by the Fifth Health Assembly, is to give technical assistance to governments in the solution of their health problems and in improving or setting up their health services. Malaria, tuberculosis, and the treponematoses are the diseases which, without having the same priority as during the first years of the Organization, continue to preoccupy governments and to call for the maximum effort. The 1953 programme also provides for work on other communicable diseases such as cholera, yellow fever, plague, typhus, rabies, leprosy, trachoma, poliomyelitis, whooping cough, diphtheria, ankylostomiasis, bilharziasis, filariasis, cerebrospinal meningitis, etc. The number of requests in connexion with these communicable diseases will no doubt continue to increase.

Leprosy, the importance of which was already recognized by the Second and Third World Health Assemblies, will be dealt with more energetically, following a request by the Indian delegation. The latter presented to the Assembly a note on the progress made in India during the last two years in the treatment of leprosy, in research on the disease, and in the rehabilitation of crippled lepers. Treatment with sulfones and related drugs soon produces clinical improvement, and the patient soon ceases to be contagious. Among crippled lepers, new surgical methods, such as tendon transplantation and nerve reunion, make possible the partial restoration of functional activity; subsequently, the patient can be given some occupation for which he is suited. Feeling that work on leprosy had thus reached a stage where WHO might take a more active interest

therein, the Indian delegation put forward a resolution by the terms of which, " the World Health Organization, in active collaboration with countries which are working on leprosy, should encourage further active programmes so as to promote progress in this field ". The proposal of India was adopted, with the warm support of the Philippines and of Thailand, countries which also have thousands of lepers. An Expert Committee on Leprosy will meet during the year.

With regard to filariasis, the Fifth Health Assembly decided that the terms of reference of the Expert Committee on Filariasis should be limited to the study of onchocerciasis and that, if funds were made available by the suppression of other expert committees, the proposed meeting should be expanded to a conference to which experts from countries in Africa and the Americas affected by onchocerciasis should be invited.

Organization of national public-health services

During 1953, WHO will continue to give active aid to the various countries in organizing or improving their public-health services. The organization of these services on the local-area scale was examined semi-officially during the technical discussions of the Fifth Health Assembly. The governments and WHO are, in general, tending to stress these problems, since only national or local public-health service can ensure the permanence of the success achieved by WHO programmes in the various countries and continue the work demonstrated or commenced by the international personnel. Public-health administration, as well as social and occupational health, present serious problems for governments, which are endeavouring to find the best method of co-ordinating the various health and medical services. WHO will deal in 1953 with administrative problems to an increasing extent, particularly the organization of hospital services and the correlation of therapeutic and preventive services. The Fifth Health Assembly requested the Director-General to undertake joint studies with the other international agencies on the relationships between public health, medical care, and social security, and to consider the appointment of an expert committee to study the problems involved in achieving the sound organization of medical care in the different countries.

Environmental sanitation

The WHO programme for 1953 provides for the creation of an Environmental Sanitation Division, which has become indispensable for dealing with certain fundamental problems which are of importance in almost all the WHO programmes in the various countries, namely, municipal sanitation (water-supply, sewerage systems, garbage and waste disposal), rural sanitation (water-supplies, excreta and sewage disposal, individual housing, garbage and refuse disposal); housing and town planning; control

of insects, rodents, and other vectors; milk and food sanitation; environmental aspects of occupational health and various other activities, particularly those with regional or worldwide application, e.g., the setting-up of uniform methods for analysis of drinking-water and uniform minimum standards for purity of water.

Education and training

The discussions of the Fifth Health Assembly in connexion with the programme clearly showed that the Member States appreciate to an ever-growing extent the importance of professional education and training and understand better and better the assistance which WHO can give them in this field. Even the delegate of one of the most developed countries, the United States of America, recognized that the most serious obstacle to health activities in his country, as elsewhere, was the shortage of qualified personnel. The Health Assembly therefore discussed those categories of health personnel which it is most urgent to train, laying stress on auxiliary personnel, and the question of fellowships : the respective advantages of individual and collective fellowships, the criteria which should govern the selection of Fellows, and, above all, the geographical distribution of the fellowships. Finding that a high proportion of fellowships had been granted to very advanced countries, the delegate of New Zealand proposed that priority for individual fellowships be given to the underdeveloped countries. Other delegates observed that the fellowships granted to the developed countries are just as valuable, since they help in training very specialized scientists or teachers, who can then give instruction in the underdeveloped countries and serve them in this way, and since the underdeveloped countries may not have enough candidates capable of benefiting from the fellowships. Another delegate expressed doubt as to the real value of fellowships and the advice of experts, since, according to him, the underdeveloped countries need above all assistance of a practical nature. They should be sent technicians willing to work with the local personnel. The Fifth Health Assembly adopted, as a provisional solution, the proposal of the New Zealand delegate " for the next three years at least ", and in the future establishment of professional education and training programmes, the views expressed by the other delegates will be borne in mind.

Budget

The implementation of the WHO programme for 1953 will call for an effective working budget of $8,489,895—a figure which is $812,115 higher than the effective working budget for 1952. This figure, proposed by the Director-General, was adopted by the Fifth Health Assembly.

However, in order to comply with the wishes of delegations which had suggested certain methods of saving money, the Assembly requested the Executive Board to examine very carefully the need for convening the various expert committees or for creating fresh committees. While awaiting this study, the Assembly decided that the meeting of the Expert Committee on Mental Health, which was to have dealt with the mental health of students, should not take place, and that the expert committees on cholera and rabies should be convened only if the advance in research in these fields warranted it. Moreover, to reduce the expenditure caused by the sending of WHO representatives to meetings of other organizations, the Assembly requested the Executive Board to study criteria which would make it possible to select those meetings at which the presence of a WHO representative was really necessary.

During the discussions on the expenditure associated with the programme, one of the most difficult questions was that of the participation of governments in work carried out in their territory by WHO. Several States pointed out that, despite their interest in the WHO projects and despite their wish to benefit therefrom, their resources were so meagre that they could not bear all the costs assigned to them. In point of fact, by the terms of a resolution of the Fourth Health Assembly, governments should, inter alia, pay the salaries of local personnel, and pay for offices and other premises, for the accommodation of WHO personnel, for material obtained within the country, for postage, and for transport. Certain governments have had great difficulty in meeting these obligations, and some of them have even had to stop the work because they were unable to pay. The provision of simple accommodation and means of transport for WHO personnel presents certain underdeveloped countries with an insoluble problem. The Fifth Health Assembly consequently decided to re-examine the question and to abolish, if possible, the condition according to which governments are required to furnish accommodation and pay subsistence allowances; the other requirements may also be relaxed if necessary. The delegates of Brazil, the Hashemite Kingdom of the Jordan, Iran, Lebanon, Liberia, and New Zealand warmly supported this resolution.

As the Director-General observed, the requests made for WHO's assistance exceed the limits of the programme and budget laid before the Fifth World Health Assembly, and the health needs of the people are, of course, greater still. If the programme is not more ambitious, it is, firstly, because really qualified personnel is everywhere too scarce for a rapid expansion of programmes, and, secondly, because any country has certain limits to its capacity to absorb outside aid—it must be given time to assimilate what it has received and to extract the maximum benefit therefrom.

Membership and Organization

At the moment when the Fifth World Health Assembly met, WHO included 80 Members. The applications of three candidates had to be examined, that of the United Kingdom of Libya, which had applied for full membership status, and those of Tunisia and Morocco, which wished to take part in the work of WHO in the capacity of Associate Members. The Fifth Health Assembly approved the application of the United Kingdom of Libya, and assigned that country to the Eastern Mediterranean Region.

The assignment of Tunisia and Morocco to a WHO region gave rise to prolonged discussion. Three regions came into consideration : Africa, the Eastern Mediterranean, and Europe. Assignment to Africa found few supporters. Those delegates who preferred assignment to the Eastern Mediterranean stressed the community of religion, language, and customs, as well as the similarity in epidemiological conditions between North Africa and the Eastern Mediterranean basin. They pointed out that Tunisia and Morocco take part in the Mecca Pilgrimage with the other Arab countries. The delegates recommending assignment to the European Region based their arguments on the following considerations :

(1) geographical : Tunisia and Morocco are separated from Central Africa by the thousands of kilometres of the Sahara desert, and from the eastern countries by the Libyan desert;

(2) economic : passenger and commercial traffic with Europe is infinitely more intense, and thousands of North Africans even go to work in Europe;

(3) health : Tunisia and Morocco have the same health problems as the countries of southern Europe. The same social diseases are found there : malaria, infectious infantile diarrhoea, trachoma, the zoonoses, and the rickettsioses.

The latter arguments finally won the day : Tunisia and Morocco (that part under French protectorate) were assigned to Europe, it being clearly understood that Spanish Morocco remains attached to the African Region.

Turkey was provisionally assigned to the European Region at her own request, by reason of the circumstances which prevent the Eastern Mediterranean Regional Committee from meeting under normal conditions. Somaliland was assigned to the Eastern Mediterranean Region and Greenland to the European Region.

The question of the frequency of the assemblies, already studied last year by the Fourth Health Assembly and by the Executive Board, was re-examined by the Fifth World Health Assembly. Certain delegates remained true to the principle of annual assemblies, while others felt that

one assembly every two years would be sufficient. The main argument in favour of biennial sessions was that both time and money would be saved. Furthermore, the delegates, who all hold important positions in their countries, would not be obliged to travel so frequently. In addition, the regional organization is now sufficiently advanced for more initiative to be entrusted to the regional offices. Moreover, several other specialized agencies have already adopted the system of biennial assemblies without any inconvenience resulting.

Those in favour of annual assemblies stressed that the maximum contact must be retained between the various Member States and the Secretariat. Other arguments were : the extra burden of work laid on the Secretariat by the present system is amply compensated for by the advantages resulting from close relations between delegates and the Secretariat during the Assembly; the monetary saving resulting from biennial assemblies is negligible in comparison with the total budget; and, finally, the first technical discussions have been so successful that it would be regrettable to make them less frequent.

No decision was taken, and examination of the question was postponed until next year. However, and again for the purpose of saving money, the Fifth Health Assembly suggested that future assemblies might be shortened.

This year, like every other year, the Assembly had to elect six States entitled to designate a person to sit on the Executive Board, since the mandate of six members of the Board had expired. The States elected were the following : Brazil, Canada, Denmark, Iran, New Zealand, and the United Kingdom of Great Britain and Northern Ireland.

Although the mandate of the Director-General should expire in 1953, and it is the responsibility of the Sixth Health Assembly to appoint a new Director-General, 40 countries took the step of proposing a draft resolution by the terms of which Dr. Brock Chisholm was asked to accept a prolongation of his mandate for a further three years. The Fifth Health Assembly, recognizing that the services rendered by Dr. Brock Chisholm have greatly contributed to the successful operation of WHO, adopted this proposal.

Finally, the Fifth Health Assembly applauded the exceptional contribution of 100,000 piastres offered to WHO by the Government of the Kingdom of Laos. The delegate of Laos expressed the hope that his Government would not remain the only one on the list of exceptional contributions.

Technical Discussions

The Fifth Health Assembly approved two topics for the technical discussions planned to take place during the session : " The economic value of preventive medicine " and " The methodology of health protection for local areas ".

The first of these topics did not form the subject of actual discussions, but instead two addresses were given, one by Professor C.-E. A. Winslow, entitled " The economic values of preventive medicine ", and the other by Mr. Gunnar Myrdal, Executive Secretary of the Economic Commission for Europe, entitled " Economic aspects of health ".[7]

In order to discuss the methodology of health protection for local areas, those taking part, numbering about 120, were divided into five groups. The General Rapporteur for all the groups was Professor James M. Mackintosh, London School of Hygiene and Tropical Medicine. Each of the groups examined the following points : survey of local health problems, organization of a local health service, function and scope of the local health service, health workers for the local health service, definition of the health centre, and community participation in local health services.

A general report [8] on the views expressed by the five groups was prepared by the General Rapporteur. The General Chairman of the technical discussions, Professor M. J. Ferreira (Brazil), submitted his conclusions on the technical discussions held this year during a plenary meeting of the Fifth Health Assembly :

> " It is, I think, clear that they were a success. We enjoyed them and, what is more, I think we all learned something from them, but we did not always learn the kind of things we expected. Some of us came looking for neat cut-and-dried solutions which we could write down and take home with us, but we learned that they do not exist. And so from our discussions we learn something more valuable, namely, how to set about finding the solutions that are appropriate to our own country—which has its own history, its own geography, and its own ways, even if it has the same diseases as other countries.
>
> " We found, too, that we in the underdeveloped countries can learn from the mistakes of the more advanced countries as well as from their successes, and that they, too, can learn from our experiments."

Professor Ferreira also submitted some suggestions for future technical discussions : more time should be devoted to them, and above all a more restricted subject should be chosen. As Professor Parisot declared last year, "the general opinion was that, in future, subjects much less vast in scope should be chosen for technical discussions so that they could be studied in more detail ".

The Fifth Health Assembly decided that technical discussions during future health assemblies should be first prepared by regional discussions

[7] For the full text of these two addresses see pages 191 and 203.

[8] See page 219.

during meetings of the regional committees. The conclusions of each regional committee should be sent to all the Member States. The technical discussions should commence during the first week of the Assembly.

For the technical discussions during the Sixth Health Assembly, the following subjects were suggested :

(1) the relative place of preventive and curative work in health programmes, and

(2) comparative studies of different methods of applying health techniques, with particular reference to maximum results for least expenditure, and to the value of voluntary participation by the people served.[9]

[9] The Executive Board at its tenth session, immediately following the Fifth Health Assembly, decided that the technical discussions at the Sixth Health Assembly should be limited to the following :

" A study of methods of applying modern health techniques of a preventive and curative nature to give the most effective and economical results on a long-term programme in relation to the following communicable diseases (*a*) tuberculosis, (*b*) syphilis and (*c*) the typhoid group of fevers."

AWARD OF THE LÉON BERNARD FOUNDATION PRIZE

During the Assembly, the Léon Bernard Foundation Prize was awarded to Professor Charles-Edward Amory Winslow (United States of America). The purpose of this prize, which consists of a medal and the sum of 1,000 Swiss francs, is to reward the author of an important contribution to social medicine, in the form of a theoretical work or a practical achievement. The Foundation was established under the auspices of the Health Committee of the League of Nations in memory of one of its most eminent members, Professor Léon Bernard.

The President of the Fifth Health Assembly summarized in the following terms the brilliant career of Professor Winslow :

" Born in 1877, this great statesman in the field of public health has devoted his entire professional life to the cause of social medicine. As Anna M. R. Lauder Professor of Public Health at Yale Medical School from 1915 to 1945, his inspired leadership has influenced the entire course of public health and social medicine.

" Many awards and honours have been bestowed on Professor Winslow : the Sedgwick Memorial Medal, the highest prize of the American Public Health Association, in 1942; the Elizabeth Severance Prentiss Award in Health Education, in 1945; the F. Paul Anderson Medal, in 1949; the coveted medal given by the American Society of Heating and Ventilating Engineers; the first Lemuel Shattuck Award, in 1950, by the Massachusetts Public Health Association on the 100th anniversary of Shattuck's great report...

" In a career so filled with fruitful activity, it is difficult to single out more than a few of his notable achievements. Apart from having been Professor of Public Health, Yale Medical School, from 1915 to 1945, and now Professor Emeritus, he has been : Director of the John B. Pierce Laboratory of Hygiene from 1932 to 1946; author of more than 20 books and 574 articles in scientific journals; editor of the *Journal of Bacteriology* from 1916 to 1944; editor of the *American Journal of Public Health*, from

1944 to the present day; and President of the American Public Health Association, the American Society of Heating and Ventilating Engineers, and the Society of American Bacteriologists.

" His international associations in the field of public health date back to 1921, when he was appointed general medical director of the League of Red Cross Societies, Geneva. From 1927 to 1930 he served as able Expert Assessor of the Health Committee of the League of Nations. He was a member of the Board of Scientific Directors of the International Health Division of the Rockefeller Foundation from 1929 to 1930.

" His monograph *The Cost of Sickness and the Price of Health*, recently published by the World Health Organization, throws much light on the economic burden of sickness throughout the world and discusses methods of reducing this burden, considering the cost of health and the expense which is justified and desirable for the control and the alleviation of preventable disease. Professor Winslow will be the featured speaker at the opening session of the technical discussions on the economic value of preventive medicine.

" Professor Winslow, in awarding you the Léon Bernard Medal and the sum of 1,000 Swiss francs, the World Health Organization pays tribute to you as a true statesman in the field of public health, a great and dearly beloved teacher, a valiant warrior in the cause of better housing, public-health education, and social medicine."

In reply, Professor Winslow said :

" I can find no adequate words to express the gratitude which I feel for this honour which you have conferred upon me. The Léon Bernard Award is the highest recognition which can come to any labourer in the field of public health, proceeding, as it does, from this great organization which represents the central leadership in health protection and health promotion of the more than three-score free and sovereign States which make up the population of the world.

" There are several special reasons why this honour is particularly precious to the present recipient.

" In the first place, I prize this award not only for itself, but because it is a special privilege to have my name follow that of René Sand, with whom I was intimately associated... more than 30 years ago.

" Furthermore, this honour means more to me because it comes through the recommendation of a committee of which Jacques Parisot is Chairman...

" Finally, I prize this award because it was established to honour another great Frenchman, Léon Bernard, worthy successor of Dupré, of Leuret, of Bretonneau, of Gendron de l'Eure in the early nineteenth century, of Pasteur and of Calmette in later years.

" My personal acquaintance with Bernard goes back for 30 years, and I should like to cite one episode of our association which has perhaps some historical significance and is not, as far as I am aware, anywhere a matter of printed record. The League of Nations was considering the possibility of establishing its Health Section, the precursor of the present World Health Organization; and a small group of us were asked to make recommendations in regard to the desirability of this step. On 5 May 1921, Bernard of France, Buchanan, Dame Rachel Crowdy and Stiegman of England, Carozzi and Lutrario of Italy, and Sueki of Japan met at 35 rue Vernet to consider the problem. We were faced at the outset of the meeting by a statement from the French Foreign Office that the State Department of the United States of America was opposed to the creation of a new body which might rival the Office International d'Hygiène Publique and the Pan American Sanitary Bureau. This was a staggering blow. Lutrario wanted to adjourn at once. Buchanan proposed postponing action until a new international conference could be called. But Professor Bernard and I, who were not governmental representatives, did not share the diplomatic fears of our governments. After a long

struggle, we persuaded the members present to adjourn officially that day and to meet again informally as individuals on the morrow. On 6 May, this unofficial group made to the League of Nations specific recommendations for the creation of the Health Organization of the League, and sowed the first small seed for the foundation of the global health programme which WHO so admirably represents today.

" I therefore prize this award not only for its own supreme significance, but because of its associations with René Sand, with Jacques Parisot, and with Léon Bernard.

" That the award comes to me is not due to any merit of my own. I owe it to the two great leaders of American public health, William T. Sedgwick and Hermann M. Biggs, with whom I had the honour of close association in my youth. Above all, I owe it to the fact that I happened to enter the field of public health almost at the beginning of its great development and to grow up, step by step, with its advancing progress. You have selected me as the symbol of the labours of thousands in this field during the past half-century : of health officers, of engineers, of nurses, of laboratory workers, of statisticians, of nutritionists, of health educators, of students of social medicine. In their name and on their behalf I accept this award."

POPULATION PROBLEMS

WHO intends to participate in the World Population Conference which the United Nations is preparing to hold in 1953 or at the beginning of 1954. In this connexion, a member of the Population Division of the United Nations made a statement in January 1952 before the Executive Board on the existing or possible future working relations between the United Nations and WHO in the study of population questions.

Population questions were brought up at the very beginning of the Fifth Health Assembly by the representative of the Food and Agriculture Organization who stressed the urgency and seriousness of the position in certain over-populated countries.[10] Dr. K. Evang, the delegate of Norway, put forward a resolution inviting the Director-General to " establish an expert committee to examine and report on the health aspects of this problem ". This proposal was supported by the delegates of Ceylon, India, Mexico, the Philippines, Sweden, and Yugoslavia. According to these delegates, the setting-up of an expert committee is the best way in which WHO can prepare for the World Population Conference. Above all, it is the only way of providing the necessary technical advice for India and other countries where over-population is creating a dangerous situation since, although the problem is predominantly one of food supplies, it is impossible for India to improve her position in this respect quickly enough to nourish the millions of human beings added every year to the population. It may be useful to note the opinion of two countries which are among those most interested in family planning, Ceylon and India. Ceylon wishes a judicious

[10] See page 167.

examination of the problem to be made, but stipulates that the work of the expert committee should be limited to countries suffering from over-population and should bear the local conditions in mind ; India feels that WHO should study all aspects of the problem : over-population and under-population as well as the nutritional, sanitary, economic, and social factors leading in one place to undue fertility and in another to relative sterility. At the suggestion of the Netherlands, the delegate of Norway amended the wording of his proposal so as to specify that the expert committee should examine only the medical and medico-social aspects of this problem and should include representation of a wide choice of schools of thought.

The opinion of the delegate of Belgium was opposed to that of the delegate of Norway. Together with the delegates of Italy and of Lebanon, he proposed a resolution by the terms of which the Assembly " resolves that from the purely medical standpoint, population problems do not require any particular attention on the part of WHO at the present time ". This joint proposal was supported by the delegates of the following countries: Austria, Costa Rica, France, Ireland, Japan, Portugal, and Spain. Their main arguments are as follows : the problem of over-population is a local one which should be dealt with by the government of the country concerned; it is an economic and not a medical problem which should be solved by economic measures; what is required is to increase productivity and not to limit births; family planning would result in ageing of the population and a decrease in productivity; furthermore, the duty of physicians is to preserve human life and not to stand in its way; finally, if WHO were to deal with these problems, it would tacitly recognize the principle according to which the State is authorized to intervene to facilitate family planning, a principle which is not universally recognized. The delegates of Panama and of the United States of America also expressed the fear that WHO might meet with criticism if it took up this problem.

As the majority of the delegates were of the opinion that the question was not ripe for international study, the delegate of India put forward a third resolution, postponing the discussion until a subsequent session of the Assembly. However, it was the delegate of Ceylon who closed the debate by suggesting, as did the delegate of Brazil, that no vote be taken on any of the three proposals, but that the official minutes should merely indicate that the views of all delegates had been noted without a decision being taken. The delegates of Belgium, India, and Norway then withdrew their proposals. The delegate of Belgium declared :

" The outcome of the debate which has taken place is that we, in this committee, are agreed that although the problem of over-population in certain regions may call for WHO's advice and assistance for the protection of the health of these peoples—advice and assistance already being given—there can be no question of our Organization, which is universal and neutral, becoming the advocate, still less the means of implementing, certain economic and social theories which are far from receiving universal approval ".

Points from Speeches

Sir Arcot Mudaliar, India

... A Minister of State in my own province, where malaria control has been undertaken by the World Health Organization, was able to announce with great satisfaction that, consequent upon these measures, malaria mosquitos had been wiped out and malaria was no longer prevalent. The arid desert areas of those villages which had been uncultivated for more than twenty years have borne such rich vegetation that it is a matter of great gratification to us all, and people have pursued the matter in other parts of the State. It is in this manner that the World Health Organization acts as a catalytic agent, and induces different governments to follow the policies that have been so conclusively vindicated in its programme...

Dr. Tran-Van-Don, Viet Nam

... We have realized that to fight illiteracy, poverty, and disease is to fight social injustice, that source of ill-health and unrest.

Our medical assistance services were highly developed. Hospitals, maternity centres and homes were functioning normally in all our provinces. Preventive measures against malaria, for example, were admirably carried out by the doctors of the Institut Pasteur, whose four establishments at Saigon, Hanoi, Nhatrang, and Dalat continue to help us in the detection of disease and in the control of epidemics. In a large city like Saigon-Cholon, which has two million inhabitants, we have not had a single case of cholera for three years. The reason for this is that we have given the population an abundant supply of safe drinking-water, and have vaccinated 800,000 persons annually...

Dr. S. Daengsvang, Thailand

... The good results of the WHO malaria-demonstration area, together with the training programme, have now made it possible for the Government to further a countrywide malaria-control programme along the same lines as those demonstrated by the WHO team, making use of national financial resources and of personnel made available under the generous aid given by the Mutual Security Administration of the United States of America, for which we are grateful. The present malaria-control programme aims at the protection of a population, in the malaria-stricken areas, of about 1,200,000 and 2,500,000 in the years 1952 and 1953 respectively...

Dr. P. Gregorić, Yugoslavia

... The role of WHO, and its help in developing health protection in my country, was expressed above all by the rapid rate at which were introduced the achievements of medical science and the experience of other countries. The advance in knowledge and skill of health personnel, and in information to the population on the problem of health protection, were promoted by various means and through various channels. A new form of introducing the latest developments was to send a number of physicians and other health workers abroad to study and observe the practices and techniques of the health services and the progress of medical science in other countries. Through the World Health Organization, a number of experts from other countries have been able to visit Yugoslavia where they offered assistance on the spot in solving certain problems and had a favourable influence upon the views and scientific efforts of our experts. The convening of various international conferences, such as the meeting of European sanitary engineers and that of experts on trachoma, and the holding of seminars on alcoholism, etc., have made it possible for our people to meet many foreign experts and to supplement their knowledge and widen their views on various questions...

Dr. M. Yamaguchi, Japan

... my Government readily received WHO fellowship-holders from our fellow countries in the region, and now seven public-health officers are with us from the Republic of China, receiving training courses in Tokyo. The invitation was also sent by my Government to the World Health Organization for the health statistics seminar for the region, to be held in August and September 1952, in Tokyo. Insecticide products are offered, to help other countries in carrying out their health programmes.

These steps were taken because my Government believes in the ideal of the World Health Organization, wisely expressed in its Constitution...

Dr. J. N. Togba, Liberia

... when the proposal [to grant fellowships in preference to underdeveloped countries] was first made, some of us who spoke did so in terms of an appeal to the countries known and regarded as developed countries, to grant what you may call a privilege to the under-privileged or underdeveloped peoples of the different parts of the world. We thank them for having accepted this particular resolution, and I still, on behalf of those who are from the underdeveloped countries, appeal to those of you who are from the so-called well-developed and advanced countries. This resolution does not imply that you will be completely deprived of fellowships, but simply that, if the question should arise as to who should be given the preference, the answer would be what I am quite sure you yourselves would say : " Give the chance to those who have the least and need it most ". On that basis, ladies and gentlemen, I again appeal to you to consider this proposal favourably...

Dr. R. Pharaon, Saudi Arabia

... At the Fourth World Health Assembly, my delegation undertook, on behalf of its Government, to have a modern sanitary station set up at the port of Jeddah before the end of 1952. I am happy to announce that this promise has been kept and that the Jeddah station will be able, if called upon to do so, to meet any emergency during this year's Pilgrimage season, that is to say, towards the end of August...

Dr. P. Noach, Israel

... During the last year, we had in Israel—as is mentioned in the Annual Report of the Director-General—a most encouraging example of international co-operation in the field of public health. A teaching mission, composed of outstanding scientists from the United States of America, the United Kingdom of Great Britain and Northern Ireland, Norway, Sweden, and Denmark, came to Israel and stayed there for one to two months, teaching, demonstrating, advising, lecturing, and discussing our health problems in the light of their great experience. This was a fine example of peaceful co-operation among nations, and my Government wishes to express once more its deepest appreciation and thanks to all the participants in this mission and to its staff from the World Health Organization, as well as to the Unitarian Service Committee and its representative. The visit was a tremendous event in the medical history of my country and we are still busy evaluating all the precious advice and suggestions we received from its members...

Dr. D. Boidé, France

... the Annual Report of the Director-General gives us a statement of the work accomplished by the Organization during its " third full year of activity ". Today we judge its work no longer on a basis of promises, but of facts; as time goes on, the part we must take on trust diminishes and our examination can be based on the concrete results which may legitimately be expected of a technical and administrative organization which has been put to the test.

The Director-General is both too ambitious and too modest when he states in his introduction that " there have been

no very spectacular advances towards the goals of WHO, but neither have there been any disquieting setbacks". We have never expected WHO to make "spectacular" progress. International action in the field of health, particularly when we consider the scope and variety of the tasks laid upon us by our Constitution, can only make slow headway. Again, we should consider it unusual if there had been any kind of setback. What we ask is that the Organization should advance smoothly, continuously, and steadily along the path it has set itself, and that the results obtained should, as far as possible, be in proportion to its financial resources and to the means at its disposal. The Director-General's report shows that there has been undoubted success in that respect and the French delegation wishes at once to express its satisfaction...

Dr. L. A. Scheele, United States of America

... The action—yes, the very existence—of the World Health Organization has set off a movement for worldwide health improvement. It has given structure and consistency to that reverence for human life which has painfully spread during past centuries despite too frequent relapses into barbarism. Nations have been stimulated to improve their own health services and have learned how best to utilize their own means to this end. The action of the World Health Organization has been strengthened by technical assistance and other funds. Several nations have taken the initiative to help others through direct technical assistance in the health field. Many non-governmental organizations are doing their share in special health fields. The results are already amazing, although they represent only a small demonstration of what can eventually be achieved, especially if all groups co-operate...

Sir John Charles, United Kingdom of Great Britain and Northern Ireland

... In the temporal measurements of the Romans, WHO has reached the end of its first half-decade, its "lustrum". It has achieved much in those five years. It can achieve even more in the future if its purposes are concentrated and its efforts not unduly dispersed. If it is animated by that same imaginative conception of international co-operation, if good will and good works continue to be the essence of that co-operation, the world can look forward to better health and the Organization to greater triumphs...

II

TECHNICAL DISCUSSIONS AT THE FIFTH WORLD HEALTH ASSEMBLY

THE ECONOMIC VALUES OF PREVENTIVE MEDICINE

C.-E. A. WINSLOW, Dr. P.H.

I deeply appreciate the honour of addressing this distinguished Assembly; and it has been a rare privilege to co-operate during the past year with the staff of the World Health Organization in the study of the problem assigned to me for this evening.

Economic values do not provide the only—or even the primary—inspiration for the worldwide campaign for public health. You are animated in your labours by what Matthew Arnold described as " the love of our neighbour, the impulses toward action, help and beneficence, the human desire for reducing human error, clearing human confusion, and diminishing human misery, the noble aspiration to leave the world better and happier than we found it ". It is men and women who are fundamentally of importance, not dollars.

Yet, you and I are not contemplating visions in ivory towers. We are working day by day in a tough and practical world. We can realize our dreams only in so far as we can convince our governments and the free peoples who control these governments that our goals can actually be attained and that their attainment will not put new strains on already strained economies. The evolution of public-health programmes in the United States of America has been markedly accelerated by the slogan coined by Hermann M. Biggs thirty years ago : " Public health is purchasable; within natural limitations a community can determine its own death-rate." Our experience during the last three decades has demonstrated that the investment is a profitable one.

Concrete and specific evidence as to the economic burden imposed by preventable disease has been placed in your hands as source material for the technical discussions of this Fifth World Assembly.[11]

The first and most obvious measure of the crippling effect of sickness on society is its influence on the length of human life. It has been computed that while a death at 15 years or under represents a net economic loss to society, a death at the age of 40 represents a net economic gain, and a death at 65 years represents a net economic gain more than twice as great.

It certainly is a cause for grave uneasiness that while the life-span in north-western Europe, North America, Australia, and New Zealand (the so-called " developed areas ", comprising one-fifth of the population of the globe) had, a few years ago, an average life expectancy of 63 years, another group of " underdeveloped areas ", including nearly two-thirds of the

[11] Specific references to most of the source material cited in this address will be found in : Winslow, C.-E. A. (1951) *The cost of sickness and the price of health*, Geneva (*World Health Organization : Monograph Series*, No. 7).

world population, had a life expectancy of only 30 years. This simple fact emphasizes in dramatic terms the major problem of the human race today. At the time of the American Civil War of 1861-5, it was said that this country could not continue to exist half-slave and half-free. Nor can the one world of tomorrow continue to exist half-rich and half-poor.

The burden of premature death which we have been considering is, furthermore, only a part of the problem. Morbidity takes an even greater toll of our economic resources than does premature mortality. In countries with a short life-span, the major factors in morbidity and mortality are of a kind that should lend themselves quite readily to control. It has been reported that in Southern Rhodesia the loss of man-power due to malaria amounts to from 5% to 10% of the total labour force, with its heaviest incidence precisely at the peak period of agricultural production. In India it has been computed that malaria produces an economic loss of about $28,000,000 a year. In Egypt bilharziasis cost nearly $7,000,000 a year. Dr. R. G. Padua reported in your discussions a year ago that in the Philippines one person in 10 suffers from malaria each year, while one person in 15 suffers each year from tuberculosis. The economic losses due to these two diseases alone are estimated at $33 a year for every person in the population.

A major part of this heavy burden of disease can—as you and I well know—be readily lifted from the shoulders of the human race; and we have no lack of factual experience at our disposal to prove what can be accomplished to demonstrate its economic value. In the case of the mosquito-borne diseases, the economic returns due to control measures are, of course, particularly striking. The dramatic elimination of *Anopheles gambiae* from Brazil and from Egypt is familiar to us all. In Peru, DDT spraying in highly malarious areas reduced parasite indices to less than 2% of their former values; and it was estimated that extension of this programme to the whole country at a cost of $1,400,000 would reduce the malaria bill by $27,000,000. In the Philippines, malaria control reduced school absenteeism from 40% or 50% daily to 3%; and industrial absenteeism from 35% to less than 4%.

In Ceylon, the use of DDT was introduced in 1947 at a cost of about $0.22 per capita in the area treated. The death-rate from all causes varied from 20 to 24 per 1,000 population. In the three years after the malaria programme was introduced, the death-rate from all causes fell to 12-14 per 1,000, representing a saving of 50,000 lives a year. A labour absenteeism of from 25% to 35% in the Transvaal, Natal, and Rhodesia was reduced to less than one-tenth of that amount; and regions of major agricultural and industrial importance have been opened up for active and fruitful development. In Haiti, a WHO/UNICEF programme for the treatment of yaws has returned 100,000 incapacitated persons to work and has increased national production by $5,000,000 a year.

Such results as this have a direct and important influence on industrial and agricultural programmes. It was recently reported at a Harvard conference on tropical hygiene that a malaria-control programme, carried out jointly by a company operating in Saudi Arabia and the national government, reduced the incidence of malaria among the company's employees from 2,000 cases a year to 53. The programme of DDT dusting cost $45,000 and the saving in medical and hospital care provided amounted to $152,000 in 1950 for the company alone. A large fruit company states that malaria control has effected a saving of $1,000,000 a year in its hospital costs and has halved the costs of housing, since it used to be necessary "to build for 500 labourers in order to have 250 working the next morning".

From the standpoint of community psychology, the World Health Organization has been wise in choosing for major emphasis during the past two years simple and efficient procedures, such as spraying with DDT, immunization with BCG, and treatment of syphilis and yaws with penicillin, which make it possible to obtain dramatic and immediate results at a minimum cost. It must always be remembered, however, that such intensive campaigns conducted against individual diseases for a short period of time are, in themselves, demonstrations and not basic public-health programmes. If they are not followed up, mosquitos will breed again, new generations of children will grow up with no resistance to tuberculosis, and treponemes will return to the attack. This is why, therefore, the Fourth World Health Assembly decided to initiate the consideration of the problems of health administration as a basic objective of the technical discussions for 1952. There has been placed in your hands the admirable report of the WHO Expert Committee on Public-Health Administration,[12] prepared under the chairmanship of Dr. Karl Evang last December, which translates the broad principles which we discuss this evening into the complex field of practical administration. This expert committee has wisely pointed out that

> "Modern public health has been developed during the last hundred years from primarily a legislative and police function to an applied science, which constitutes an important and integral part of social and economic evolution. The techniques used in health administration have consequently been changed to emphasize positive measures in planning and organizing the modern health services on a community basis, in order to create a healthy environment for the people..."

We must meet health emergencies as they arise; but we must do so in such a way as to promote gradual progress toward the ultimate ideal of a soundly conceived and adequately supported permanent public-health service in every area of the habitable globe.

Such a programme should be broadly planned for a period of 5 or 10 years ahead, with the ultimate goal of including not only the prevention

[12] *World Hlth Org. techn. Rep. Ser.* **55** (to be published); see also *Chron. World Hlth Org.* 1952, **6**, 146.

of mass epidemics of malaria, tuberculosis, and syphilis, and not only the institutional and domiciliary care of disease, but the positive promotion of health—physical and mental—in the widest sense. Within such a programme there should be established a series of tentative priorities. In countries where the control of communicable diseases has been effectively accomplished, the primary objective for the coming decade may be the care and rehabilitation of an ageing population and the promotion of an effective programme of improving mental hygiene. In other countries, control of malaria, tuberculosis, and syphilis may be a major objective for many years to come. In Liberia, where there is one physician to every 63,000 inhabitants, one nurse to each 61,000, and one hospital bed to each 4,000, where nearly a third of the population is infected with malaria, the limited financial resources (about $0.16 per capita) are perforce being devoted largely to the immediate provision of basic clinic and hospital care.

When the stage of progress has been reached where the public-health machinery is beginning to operate effectively in the control of mass epidemics, the programme must be expanded to include the promotion of maternal and child health (as in a province of Mexico where the training and supervision of midwives lead to a reduction of infant-mortality rates from 223 to 112 per 1,000 live births); to nutrition (as in Newfoundland, where enrichment of flour was associated with a reduction of 25% in the tuberculosis rate and of 40% in the infant-mortality rate, or in Bataan province, where enrichment of rice reduced the beriberi death-rate from 263 to 28 per 100,000); to housing, so grossly neglected in most countries of the world; to occupational hygiene which becomes day by day a more and more urgent problem with the extension of the Industrial Revolution to new areas of the Far East; and, above all, to the complex problems of mental hygiene which only now, at long last, are beginning to receive the attention they deserve.

The discussions to which you will devote yourselves during the next two days will be wisely directed primarily at the desirable organization of the local health unit which serves a specific population group in a particular area. Federal and State or provincial health organization differ widely under different political systems; but when one gets down to the people in a given city or district, the problems of local organization are less dissimilar. In a congested district of London or in an agricultural area of Pakistan, there must be represented at least three of the various professional groups of which the super-profession of public health is composed. Of course there must be a physician, in charge of the medical aspects of the work. There must be an engineer, competent to deal with the problems of the environment. And there must be a public-health nurse as the effective link in bringing the programme to the ultimate consumer, the family—whether that family lives in the jungle or in a city tenement. In the less prosperous areas of underdeveloped countries, the actual field workers

may be only of the grade of orderlies, of sanitary inspectors, or of practical nurses (under the direction of fully-trained supervisors); but the principle remains that these three fields of service must somehow be represented. Behind these first-line troops, at the local or provincial or national level, there must be provided the staff services of the dentist, the veterinarian, the hospital administrator, the laboratory worker, the statistician, the nutritionist, the experts in maternal and child health, in mental hygiene, in housing, in occupational hygiene, on tuberculosis and treponematoses, and the like.

In order that the programme in a given area be sound, it must be planned to meet the needs of a particular locale; and it must be administered with the special skills which come from training and experience. Efficient public-health service depends primarily on administrators. Actual studies of the daily routine of the health officer have shown that a very large proportion of his time is spent in dealing with problems which have no relation to the practice of medicine, but which call for organizing ability and skill in applying the principles of mental hygiene to the difficult task of fostering co-operative effort.

The Expert Committee on Public-Health Administration has pointed out that in the United States of America promising experiments have been made in relieving the over-burdened medical health officer by the use of specially trained, but non-medical, health administrators. These are university graduates with basic college training in the arts and sciences who, after a year's instruction in a school of public health, are prepared to serve as administrative assistants to the health officer or as his deputies in charge of the work in a local area.

There is still one other point which is of vital importance in our planning for the future.

Public health, like government, must, in the words of Theodore Parker, be " of all the people " and " by all the people ", as well as " for all the people ". Health programmes can only be truly effective with the understanding, the support, and the participation of the citizens. This is where the health educator comes into the picture. Today, the good health educator is no longer merely an expert at selling a finished product of expert thinking. He or she is far more concerned in working directly with the people themselves, as represented by their leaders, in educing from them intelligent co-operation in planning the programme itself so that it becomes their programme and not something imposed upon them from above. Only in this way can the programme be soundly planned and firmly supported. In this difficult task of bridging the gap between expert knowledge and local mores, the psychologist and cultural anthropologist are coming to play an increasingly effective role.

All this sounds relatively simple as presented from the speaker's rostrum at a World Health Assembly. I know quite well how many are the

obstacles to be overcome. I understand the difficulties which face health leaders in countries where there is available one physician for every 25,000 or 50,000 inhabitants; or one hospital bed for 1,000 to 10,000 inhabitants; no sanitary engineers, and no health educators. I realize how difficult it is to obtain funds for the most limited health services in countries where the mean per capita income is less than $50.[13]

I am certain that in many areas progress must be slow; yet, if it is sound and if it is rooted in popular understanding and participation, I believe that it should be possible to make steady and continuous advance. I would urge that, with the expert counsel of the World Health Organization, the health leaders of those countries which are still near the beginning of the long road should keep careful records of the cost of their health programmes and of the actual results attained, and make estimates of the economic gains corresponding to the decreases recorded in mortality and morbidity. A tacit agreement with the fiscal authorities that a sum equal to one half of such economic gains be appropriated for the further expansion of the public-health programme might probably yield all the funds which could be wisely used in making the next needed advances !

In planning our health programme we sometimes meet a real challenge as to the essential desirability of the goals we seek to attain. Certain population experts tell us that there are already too many people in the world; and that such successful health programmes as that carried out in Ceylon (which has led to an increase of 2,000,000 in the population) will increase and not decrease the sum of human misery.

This argument appears to me to be a fallacious one, because it is founded on the assumption of some basic law which limits the possibilities of economic development to those which have at the moment been realized.

This assumption appears to be unjustified. The students of agriculture paint for us a wholly different picture. Irrigation, control of erosion, the use of fertilizers, eradication of plant diseases, improvements in the type of animals and plants to be cultivated, and more efficient methods of food storage present enormous possibilities of increasing food production. The experts in FAO have set target goals which contemplate an increase of 90% in the food-calorie yield of the less-developed areas by the year 1960, an increase which could not only provide for probable increases in the population, but also for a substantial improvement in standards of living.

In many countries the development of mineral resources, of timber production, and of local industries could make possible the purchase of food from more purely agricultural areas.

When we consider on the one hand the present wastage of the fruits of human effort in the rearing of children who will die before they are able to make any economic return to society, and in the support by those adults, who remain in good health, of a large proportion of invalids crippled by

[13] Per annum. — Ed.

preventable disease, it is difficult to see how one can seriously question the importance of the contribution of public health to global prosperity.

The control of malaria in Sardinia has made possible a plan now under way for settling 1,000,000 Italians from the overcrowded mainland on that island. Until now, malaria has been the only barrier to fruitful agricultural development.

A most suggestive experience is that acquired in the building of the Pan-American Highway through Central America. Undernourished workers had produced most unsatisfactory results. Provision of an adequate diet for these workers more than doubled the day's work performance. In the opinion of the bureau in charge, the dietary deficiencies of the local population were not due to the lack of capacity of the area to produce food, but rather to the lack of transport necessary to make food production profitable. Thus food makes possible the building of roads; and the building of roads makes possible the production of more food.

The experience of the Pan-American Highway does, however, emphasize the vital interrelationships between health and social problems. The public-health programme cannot be intelligently planned in a vacuum, but only as a vital part of a broader programme of social reconstruction. In a particular area, higher crop-yields, increased industrial development, or improved transport facilities may accomplish as much for health as more clinics and hospitals. A commentator on the excellent Egyptian demonstrations of co-ordinated health, social, and educational programmes has said, " the entire success of any public-health programme is dependent on the concurrent and integrated approach to the social, educational, and economic problems within the area ".

The Expert Committee on Public-Health Administration has presented the following impressive list of social services which contribute to the success of the health programme : social welfare, social security measures, education, food production and distribution, reservation of land, veterinary services, labour standards, recreation, transport and communications, youth movements, irrigation, environmental and personal cleansing services, conservation of natural resources, and population and family planning. This is why WHO has worked in the closest and most intimate contact with the United Nations and its co-operating bodies.

In certain countries, it is obvious that the pressure of population is so great as to call for the supplementation of such positive and constructive measures as those which we have discussed by efforts to limit excessive rates of population increase. The Population Reference Bureau has listed 13 areas, in South-East Asia, in the Pacific Islands, and in the Near East, where such excessive birth-rates exist. Where limitation of population increase is a pressing problem, however, there are more humane agents of control than malaria and tuberculosis. Japan has effected substantial reductions in its birth-rate in recent years. India has, within the past year,

asked WHO for expert counsel on methods of limitation of reproductive rates of a character suitable to the mores of the people.

It is the belief of the speaker that improvement in health and prosperity may in itself tend to promote a better balance of population. In north-west Europe and in North America—the areas with highest economic status and lowest mortality—the annual excess of births over deaths is between 4 and 6 per 1,000 population. This figure rises to 15 for the Near East and to 20 for Latin America. How far certain countries are rich because their population grows slowly and how far their populations grow slowly because they are prosperous is not easy to assess; but the general relation is clear.

The building of a prosperous and a stable world depends on intimate collaboration between experts on public health, on agriculture, on engineering, on industry, on economics, and on sociology. It also demands a co-operation between governments and peoples, which is even more difficult to attain. The world cannot be saved by any one country alone; but only by the joint efforts of all our national sovereignties, from Afghanistan to Yugoslavia. Recognition of our common responsibility is the essential condition for survival. As Benjamin Franklin said in connexion with federal union of the American colonies into a single State, " we must indeed all hang together, or, most assuredly, we shall all hang separately ". Yet the fact that the salvation of our separate national units is interdependent is not the real heart of the problem. Governments are, after all, only instruments for the welfare of human beings. The ultimate ideals of our policies must be based on a more fundamental factor, a deeper realization of the brotherhood of man—on the precious value of the individual human being. It is the recognition of this value which is the real basis of the philosophy of free and democratic peoples.

In the Charter of the United Nations, certainly one of the most important political documents in the history of the human race, the member nations pledged themselves to co-operate " in solving international problems of an economic, cultural, social, or humanitarian character; and in the promotion of higher standards of living, full employment, and conditions of economic and social progress ". As early as 1946, the General Assembly of the United Nations empowered the Secretary-General, in co-operation with the specialized agencies, to implement this policy and in this way the technical assistance programme had its real beginning. In January 1949, the President of the United States of America gave his support to this ideal and said :

" We must embark on a bold new programme for making the benefits of our scientific advances and industrial progress available for improvement and growth of under-developed areas... We should make available to peace-loving peoples the benefits of our state of technical knowledge in order to help them realize their aspirations for a better life. And, in co-operation with other nations, we should foster capital investment in areas needing development."

By 1950, the programme of technical assistance was well launched; and you are all aware of the notable role played in its development by WHO.

We have made substantial progress along the road of technical assistance in the sense of training personnel and providing expert counsel for the attack upon health and social problems in many areas of the world. I believe, however, that much more concerted action is necessary in those phases of the programme which involve the fostering of " capital investment in areas needing development ". The installation of water-supplies or irrigation works, and the development of transport systems or of local sources of power, need capital which the countries concerned cannot, at the moment, supply, but which would yield ample income on the investment required. The needed funds may be—and, in some cases, have been—provided by private industrial corporations. In other instances, they have been supplied by some friendly government. Both these plans have their inherent dangers. Multilateral arrangements, in which WHO or some other organization affiliated with the United Nations is the actual agent of distribution, are preferable to either. Most suitable of all, perhaps, would be the creation of special regional boards established under the aegis of appropriate international bodies, but with a high degree of autonomy in the actual conduct of the work. In my judgement, the Tennessee Valley Authority (TVA) in the USA has made one of the major contributions to social planning of the past quarter-century. This Authority is a quasi-public, quasi-private corporation, whose members are appointed by the government, but once appointed are entirely autonomous, having, on the one hand, no temptation to yield to political pressures and, on the other hand, no temptation to accumulate profits for anyone except the populations served. A world TVA would, of course, be a fantastic thought; but a series of regional TVA's, set up for the purpose of attaining specific ends under the general auspices of the United Nations, might provide an ideal type of organization.

Technical assistance is not a relief project for feeding starving millions; nor is it a vision of a new world which would reorganize national economy overnight and impose upon any peoples an alien way of life. " It is a programme of pump-priming, of helping people to help themselves, with major possibilities of improvement in total world economy as a result ". The need for such a programme is obvious; and the sands of time are running out so fast that we cannot much longer safely delay large-scale constructive action.

There are times when the future of this world of ours seems rather grim; and voices of discouragement and despair are heard in many quarters of the globe. Since the days of the cave-man, however, this earth has never been a Garden of Eden, but rather a Valley of Decision, which calls for all the toughness and the resilience which the human race has at its disposal. As H. G. Wells said in his great parable, *The food of the gods*, "This earth

is no resting place; this earth is no playing place... We fight not for ourselves, but for growth, growth that goes on forever. Tomorrow, whether we live or die, growth will conquer through us. That is the law of the spirit for ever more ".

I believe that the historian of the year 2000 will look back to the mid-Twentieth Century as the date of certain outstanding milestones in the history of the human race. Whatever happens to you and me during the next few decades, steps have been taken which mark significant heights in the slow, upward climb of mankind from the jungle to a sane and solid global society. One of the most important of these milestones is the adoption of the principle of technical assistance, which recognized the brotherhood of man in the common task of warfare against disease, poverty, and ignorance throughout the world.

These great ideals of peace and of prosperity for all the children of men will not be realized readily or soon. In their ultimate triumph, you and I have good ground for hope. I say " you and I " because all the members of WHO are working in an area of applied biology. Medicine, nursing, mental hygiene, nutrition, parasitology, even sanitary engineering as compared to other aspects of engineering, are rooted in biology. I can well understand how the physicist, faced, in the second law of thermodynamics, with the picture of a universe running down inexorably into the form of low-grade and uniform heat-energy, or the economist of an older school, who accepted Lassalle's iron law of wages, must be either a pessimist or an escapist, seeking comfort in a dualism which balances a hopeless material universe by an unreal and separated world of subjective imagination.

But the biologist has, in his science, facts which do not contradict the laws of thermodynamics, but rather supplement them, and wholly reverse their philosophical implications. The facts of biological evolution are as valid as the facts of physics. We know with certainty that once, in the formation of the globe, there were only energy and inorganic elements; and that somehow organic matter came to be. We know that from this organic matter some form of the life process was evolved. We know that in some fashion cells were formed—that in the border area between sea and land these cells developed into organisms. Some of these organisms moved to the land and became more and more complex in form. Somewhere in the jungles of prehistoric days, primitive man came into being.

Then, as anthropology and history teach us, the same process proceeded on a social plane. Tribal organizations came into being, nations were born; and the task we now have before us—the building of a true world-order—is the next and final step (until we penetrate interstellar space) in the same great cosmic process. This process gives us ample ground for confidence in the future, based just as truly as the viewpoint of the physicist, on natural law, but on a different law. Joseph Needham, the distinguished English biochemist, has said that the law of evolution is a

kind of converse of the second law of thermodynamics, equally irreversible, but contrary in tendency. Of course, this is no guarantee of what is going to happen to the United States of America or to Indonesia in 1952. In the history of biology many organisms and many societies have failed. We may fail in the short term, but the factual process of evolution gives us a solid ground for faith in the ultimate result; and we may be reasonably sure, from the history of evolution, that the societies which survive will be the ones that can change to meet new conditions; and that those which crysallize their philosophies and their societies in any fixed, dogmatic form are eventually doomed. The dinosaurs were large and powerful; but the dinosaurs are dead.

Remember, too, that this process of evolution is not limited to the areas of physiology alone. Its laws also govern progress in the psychological field. My colleague at Yale, Professor E. W. Sinott, in his little book, *Cell and psyche*, has said : " This universe comes to flower not in atoms or galaxies, but in poets and philosophers, in scientists and saints ". Professor Sinott adds

> " It is a lofty conception, I think, to regard the soaring spirit of man, which creates beauty, strives for knowledge, and aspires to an understanding of the mysteries of the universe, as rooted in the same vital processes which fashion his limbs and time the beating of his heart; to look upon the inspiration which welled up in Shakespeare's mind as he wrote *Hamlet*, or in Beethoven's to find expression in the *Ninth Symphony*, or the imagination which pictured the *Last Supper* to Leonardo before he transferred it to the chapel wall, or the vision of St. Francis in the Portiuncula, as but loftier expressions of that same creative urgency that stirs in protoplasm everywhere. By means which still elude us, but are the goal equally of the biologist, the poet, and the philosopher, are born those yearnings which make man the noble animal he is. Living things are seekers and creators, and striving for goals is the essence of all life; but in man these goals have risen to heights before undreamed of, and he can set them even higher at his will. Man's feet are planted in the dust, but he lifts his face to the stars."

I have cited, for the most part, western leaders of thought, because I happen to be a westerner. I do not, however, forget the art and the philosophy of India and China and Persia, or the fact that all the greatest and most influential religions which have inspired mankind have had their birth in the Far East and the Near East. Albert Schweitzer found the key to his great doctrine of " Reverence for Life " on an African river; and according to his biographer, " Africa is the symbol of his life ".

On the higher as well as on the lower levels of evolution, it is the development of more and more complex interdependent wholes which is basic. We know that it is not the constituents of living things, but rather the relations between them, which are significant. Organization is a problem of relationships; biological organization and our desires and purposes, the highest phenomena of our spiritual and mental life, are manifestations of the same underlying process. Body and mind are aspects of the same basic phenomenon; and the goal of the organizing process is wider and

wider co-ordinated wholes. This is the essential principle which has transformed protein to cells, cells to organisms, organisms to man, and man to society. It is the same principle, on a higher plane, which can help us to create a new world-order.

Matthew Arnold once spoke of " the power not ourselves which makes for righteousness "; but this is too limited a phrase. For me, there is a power in ourselves, as well as outside ourselves, a power in the universe, which makes for righteousness. It is this power which we invoke, it is on this power that we can base our hopes of building a better world for all mankind.

ECONOMIC ASPECTS OF HEALTH

GUNNAR MYRDAL

I appreciate very much the honour of being asked, as an economist and social scientist, to contribute my views to this evening's discussion on the economic value of health. I have read with great interest and real appreciation the paper before the house, Professor Winslow's useful and timely book, *The cost of sickness and the price of health*, and I have listened with attention to his speech to us tonight.

Perhaps I may, by way of introduction, present a general excuse on behalf of my own profession which may also serve as an explanation of why, in the social sciences generally and economics particularly, these very important questions, the economic value of health and the price of health, have been given comparatively little thought. Economics, as a science, has had, from its very inception, a strong materialistic bias, and there were some good reasons why it was once challenged as the " dismal science ".

Economics has mainly been a study concerned with the remunerations in terms of money of the factors of production in various technical combinations and with the prices of commodities and services which are commonly bought and sold in the market.

By " capital ", economists have meant material capital. It is true that for a couple of generations economists of a more philosophical bent of mind have been eager to recognize the existence of " personal capital ". But our very large literature on capital, depreciation, and interest has never taken this admission very seriously.

" Consumption " has been in juxtaposition to " production ", and the assertion that there is also a " productive consumption " has remained a sort of general qualification, limiting in an undefined way the bearing of our conclusions but never really taken as a challenge for serious study. Thus the money paid for repair and maintenance of a house or a machine has entered under the heading " cost items " into all calculations of the relevant economic quantities in economic analysis, e.g., national income. The cost of preventing or curing disease, however, has never been so considered. This practice has prevailed in spite of the fact that even in the most developed countries, those with the greatest accumulation of capital wealth, the contribution of human labour to the national product and its imputed distributional share in national income account for two-thirds or even more of the total.

In the same way, the public finances of the State and the municipalities were originally looked upon as " unproductive " expenditure for collective

consumption. Therefore the doctrine was early expounded that the best system of taxation was the lowest taxation. This is, of course, no longer the prevalent theory. But nevertheless comparatively little effort is still given to ascertaining by scientific analysis the productivity of various public expenditures, for instance, those incurred in preserving and raising the level of health in a community.

I believe that I am not wrong in stating that there is still a heavy legacy of this materialistic bias in economic thinking, which becomes the more important because the economists and their intellectual exertions have, for a long time, come to have a much greater direct influence on the formation of national and international policies than the thought products of all the other social sciences put together. The scientific study of the economics of sickness and health was, in any case, started primarily not by the economists but by public-health officers, physicians, and social-welfare experts who were in direct contact with the practical problem, and it has only gradually been brought into the focus of the social scientists. We must face the fact that it will take a very long time before our knowledge in this field has become so intensive and complete that it can be properly integrated into, and given its due place in, economics and social theory generally.

One additional reason for this is, of course, that the quantitative relations themselves in this field are so much more difficult to pin down and ascertain in an unequivocal manner than, say, market prices, rates of interest, wages, capital values, capital depreciation, and other quantities commonly employed in economic reasoning. There is no easily determinable money value of a healthy human being as there is of a house or a machine. The difficulty of defining the quantities and measuring them properly for exact analysis is, however, not only due to the absence of a " market " in the sense of economic theory, but has deeper and more fundamental reasons to which I will come shortly.

I am sure I will be excused if in this lecture I lay the main stress on the health problem as it presents itself in the so-called " underdeveloped " countries. These countries are, generally speaking, just as far and perhaps even farther behind the developed countries in their health programmes as they are in economic and social development generally.

Certainly much is left to be done in the health field even in the highly developed countries. This is clearly demonstrated by the greater frequency of all sorts of diseases and the higher mortality- and disability-rates prevalent in the lower-income classes and regions within those countries. As we all know but sometimes tend to forget, there are in many of these richer countries large rural and urban areas which do not deserve any other characterization than " slums ". And certainly these countries also have other economic problems connected with their health work to solve besides those connected with the existence of poverty.

But their problems, compared to those of the underdeveloped countries, are neither of the same magnitude nor of the same crucial importance for the fate of the world. The great problem of health in the world today is the one which is facing the majority of countries commonly called underdeveloped, and the great majority of human beings who live there and are eking out a miserable existence is a social setting where their work is unproductive, their food scarce, their housing inadequate, their life-span short, and their health bad or in constant danger.

In his book Professor Winslow points to the fact that poverty and disease form a vicious circle. People are sick because they are poor; they become poorer because they are sick and sicker because they are poorer. There is a cumulative process in operation, continuously pressing levels downwards, where one negative factor is at the same time both cause and effect of all the other negative factors.

The general relationship between poverty and disease is illustrated by all health indices. Thus the life expectancy at birth in the small part of the world which can be characterized as developed is more than double that in the much larger part of the world which is underdeveloped. Infant mortality has, as we all know, in countries with a high standard of living been brought down to a mere fraction of that in underdeveloped countries. And, as we all also know, we have a similar, even if ordinarily smaller, difference in health standards between the poor people in the developed countries and the better-situated social classes in these same countries. But in the underdeveloped countries large sections, sometimes even the majority of the population, are plagued by illnesses which are now entirely, or almost entirely, stamped out in more fortunate nations.

Some years ago I was entrusted with a comprehensive study of social conditions in one of the highly developed countries, the United States of America, from the special angle of the most disadvantaged group in that society, the negro people. I had occasion then to enter rather deeply into what I called the theory of the vicious circle or, more learnedly, of cumulative social causation. This theory, in its simplest terms, concerns the reciprocal effects of all social factors : the tendency, for example, of negative elements in a given situation to strengthen each other. I pointed out that this principle had a much wider application in social relations than the particular problem I was studying, and that the principle of cumulative causation should be developed into a main theoretical tool in studying social change. Actually, I made this method of looking upon social reality basic to my whole approach to the problem I was investigating, and I devoted a methodological appendix in my book[14] on the negro problem in America to clarifying and formulating it.

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[14] Myrdal, G., Sterner, R., & Rose, A. (1944) *An American dilemma : the Negro problem and modern democracy*, New York

In the case of the negro people, the prejudice they encounter from white people in the form of discrimination is a fact of which they are constantly aware, and it is very natural that they consider discrimination as the cause of their lower plane of living, which they are also painfully aware of. And they are undoubtedly right. But it is also true that the lower plane of living of the negro people, for example, their lower earnings, their bad housing and food conditions, their inferior levels of education and health, etc., in their turn give support to white prejudice. White discrimination and low standards of living for negroes thus mutually " cause " each other.

And there is the same relation between every component negative factor on the standard side. A fall in negro employment and earnings, for instance, will cause a fall in standards of nutrition, housing, and health and will make it more difficult for the negro families to give their youth more education, and so forth; and all these effects of the initial change will, in their turn, decrease further the negroes' possibilities of getting employment and earning a living. The original push could have been on some other factor than employment, say, for example, on health or on educational facilities for negroes. Through a continuing series of actions and interactions the whole system of all the different factors implied in the term " the negroes' plane of living " would have been set in motion in the direction indicated by the first push, whether up or down, but proceeding faster and a much longer way.

I believe it is very important in the studies to be undertaken of the economic value of health that a dynamic theory of social change, similar to that at which I have hinted here in very general terms, be kept clearly in mind and effectively utilized as the conceptual framework for the analysis. If things happen to remain relatively static, about as they are and have been, this means that the forces balance each other, so that a persistent condition of ill health in a country constitutes both the cause and the effect of a low earning capacity, widespread illiteracy, and minimum levels of nutrition and housing. Such a static " accommodation " is, however, entirely accidental; the empirically observable balance of poverty, illiteracy, and sickness is not a stable equilibrium towards which the forces must tend naturally and necessarily. For if any one of the composite factors in the plane of living, say, the health conditions of the population, is induced to change, this will cause a change in all the other factors too, and will start a process of interactions, where the change in one factor will continuously be supported by the reactions of all the other factors, and so forth. The whole system will be moving in the direction of the primary change, but much farther.

When we speak about the vicious circle of cumulative causation, we have in mind a situation where the forces are pushing the system downwards. The effects of an improvement are also cumulative. Thus, to refer again to the special field where I made my study of cumulative causation, the last ten years have seen a dramatic movement upwards of the entire plane of

living of the negro people in the USA, including their health standards. This constitutes a rather sharp break in the situation of relative stagnation which for more than two generations had ruled after the Civil War and the Reconstruction Period. It was at the end of this period of relative stagnation that I made my study, and the picture which emerged was one of mass distress, poverty, disease, illiteracy, and, in large sections of the negro people, utter hopelessness. It was at that same time that Franklin Roosevelt declared the underdeveloped South to be the " nation's problem number one ". Today conditions are, of course, still far from ideal. But the important thing is the general direction upwards of social change and its great speed. I know of no particular trend in American society more heartening than this one. And I have personally an additional reason to feel satisfied as, after intensive study of the potential dynamism within that particular system of causal relationships at that particular time, I foresaw a sharp break upwards in the development, a view rather in contradiction to that of most experts in the field who were inclined to take too static an approach.

The parallel to the problem of poverty and disease among the negro people in the USA and, more generally, the problem of the poor masses in the urban and rural slums of our richer countries is real and apparent, in spite of the important difference that the distressed populations here live right in the middle of a highly developed industrial civilization. The operation of the principle of cumulative causation is the same in both cases; it gives reason for the same hopes and implies the same dangers. In a degree determined by the empirical functions of causal interrelations, it gives rise to final effects of much greater magnitude than the initial move of the one factor which has been induced to change.

It is apparent from what I have said that it is not an altogether easy matter to give a clear definition and still less to measure quantitatively the economic value of measures to promote health. First, the cost of sickness, disability, and premature death, or, from the other point of view, the economic rewards of health reform, will figure differently in the short and the long run, as well as in different environments. Second, the long-run values will in any case be dependent upon how all these factors in the concrete social setting we are studying are interrelated, i.e., what effects a change of each one of the factors will have on all the other factors. Without a careful study of the entire complex of social dynamics, no figures can be calculated which have a definite meaning and are in any sense correct and relevant.

The task of social engineering is to proportion and direct the induced changes in the whole social field so as to maximize the beneficial effects of a given initial financial sacrifice. One important corollary to the theory of cumulative causation is that a rational policy should never work by inducing change in only one factor ; least of all should such a change of only one factor be attempted suddenly and with great force. This would

in most cases prove to be a wasteful expenditure of efforts which could reach much further by being spread strategically over the various factors in the social system and over a period of time. What we are facing is a whole set of interrelated adverse living conditions for a population. An effort to reach permanent improvement of health standards aimed to have a maximum beneficial effect on the well-being of the people will, in other words, have to be integrated in a broad economic and social reform policy. Such a policy will have to be founded upon studies of how in the concrete situation of a particular country the different factors in the plane of living are interrelated and how we can move them all upwards in such a fashion that the changes will support each other to the highest possible degree.

Whatever the actual process of social change will come to be in the field of health as well as in the broader field of economic, social, and educational development in the underdeveloped countries, this process will be different in several respects from the process which, during a number of generations, has lifted the developed nations to their present relatively high level. One important difference springs from the fact that social change in the underdeveloped countries will now evolve in a world setting where knowledge of techniques in all fields, in medicine as well as in agriculture and industry, is available which did not exist when, in their time, the developed countries became developed. In a general way this would ensure that the changes could be carried out more cheaply, more effectively, and very much more quickly.

The fact that modern techniques exist does not, however, ensure that they will be utilized to anything like their maximum potentiality, or even to the extent which would be reasonably possible. There are in many of the underdeveloped countries vested interests in the continued employment of old methods and in the preservation of the status quo. There are social stratifications, economic inequalities, and reactionary political institutions ruling in many of these countries which act as heavy impediments to reforms and which, in any case, tend to reduce their efficiency. I am here referring to the urgent need for very radical changes in the economic, social, administrative, and political set-ups of many of the underdeveloped countries and the equally urgent need for fundamental education as prerequisites for permanent real progress in any field. One important aspect of this need for internal reforms in many of the underdeveloped countries has been high-lighted in resolutions on land reform, adopted by several organs of the United Nations.

The transfer of techniques, and particularly bringing them to a more extensive use, often requires also a considerable investment of capital. If the process of progress is to be at all rapid and carried out without imposing too great sacrifices upon the people, this capital cannot be formed more than in part from current savings in the impoverished populations of underdeveloped regions. Another part must be provided from abroad.

The United Nations' group of economists, to whose calculations I will shortly refer, assumed that initially more than two-thirds would have to be obtained from the developed countries.

A second important difference between the conditions under which countries will have to seek to become developed now and the conditions which prevailed a century ago is, however, that the international capital market is almost destroyed. When countries like the USA or Sweden entered into their rapid industrialization process in the last century, they could build up their resources with borrowed capital, because they could draw on the resources of a smoothly functioning capital market. Such a source of capital does not exist any longer, and, for many reasons which it would take me too far afield to explain, it is not likely to return.

We are all enthusiastic about the start we have made in the organizations within the United Nations' family to engender international programmes to provide technical assistance and, to a very limited extent indeed, capital for economic development in underdeveloped countries. It is in direct opposition to a critical view of these attempts that I now point out that, for the time being, all our efforts in spreading progress to the underdeveloped regions of the world are homoeopathic. It is natural that we who are active as officials in the international organizations feel a personal satisfaction whenever and wherever we can contribute in a concrete way to improvement, but we should not lose a sense of proportion. We are creating expectations in the underdeveloped regions far above those which, for the time being, we have the means to satisfy. Yet our efforts to substitute international and national action for the old international private capital market are as yet, if not a failure, only efforts born of desperation to nourish a hope. They are the try-out of a new approach.

There is a special reason why it is particularly important to establish this fact when discussing the economic aspects of the international health problem. For a successful work of health reform is bound to increase progressively the need for more productive techniques and for capital influx from abroad, if the result of higher health standards is not to be a spur to continued and perhaps aggravated poverty. This is related to a third difference in the conditions for development now and a hundred years ago. While in the last century the improvement of sanitation and health standards was achieved only gradually and rather tended to follow, instead of precede, the industrialization of the countries which then became developed, now we master techniques for the prevention and cure of diseases which can immediately increase substantially the speed by which the populations concerned are increasing, which is the difference between births and deaths. And it should be borne in mind that, even with the present abominably high death-rates in underdeveloped countries, the rate of the net population increase is extraordinarily high in some of the poorest regions of the world.

The international health problem should therefore be viewed against what we know about the actual trends of economic development in the world today. Speaking in very general terms—and making an exception for the countries in eastern Europe under a communist regime which form a group by themselves—the broad picture of the post-war period is this : there has been a very rapid continuous industrialization of the already highly industrialized countries in northern America and western Europe; they have had an exceptionally high rate of investment and have experienced a rapid further rise in productivity ; but, on the whole, there has been little progress in the underdeveloped countries. The developed countries have rapidly become still more developed while the underdeveloped countries have remained underdeveloped.

New capital investment has been concentrated in the regions where the old wealth had already been amassed. At least, relatively speaking, the post-war years have meant that the richer have become richer and the poor have become poorer. If a reference to a more respectable source is preferred, we may phrase it instead in this way : that what has happened appears to confirm the statement that : "Unto every one that hath shall be given, and he shall have abundance; but from him that hath not shall be taken away even that which he hath" (St. Matthew xxv. 29). It is thus a generally known fact often referred to—so also by Professor Winslow—that the world population is more than 10% larger than before the second World War, the growth being largest in certain underdeveloped countries, while world supplies of food are probably still considerably below the pre-war level and anyhow not above. And it is not the inhabitants of the prosperous and developed countries who bear the brunt of the greater scarcity of food.

This tendency, under which the world's resources for economic development are being increasingly employed for the further development of the already developed regions, has been forcibly spurred by the armament race. With your permission, I will here quote one paragraph from the newly published *Economic Survey of Europe in 1951*, prepared by the Research and Planning Division of the United Nations' Economic Commission for Europe :

" Viewed in a wider perspective, the flow of capital to the more developed areas is but one expression of a long-standing tendency for investment to be concentrated overwhelmingly in countries already industrialized—a tendency greatly strengthened by the present wave of rearmament expenditures. Defence outlays in the leading industrial countries of eastern and western Europe, the Soviet Union and the United States are likely soon to reach levels where they will together equal or even exceed the aggregate national incomes of all the under-developed countries and will be some twenty times the investment financed out of these countries' own domestic savings.[15] The effect of

[15] " Based on data on national defence programmes as given in the present and in last year's Survey and on estimates of national income and net domestic savings as given in *Measures for the Economic Development of Underdeveloped Countries*, Report by a Group of Experts appointed by the Secretary-General of the United Nations, 1951, page 76 ".

these expenditures will probably be to increase substantially the production capacity of the industrial economies (particularly in the metals and engineering industries) at a time when plans to promote economic development elsewhere are being held back because of competing demands on financial resources and industrial capacity. The most serious implications of the intensified concentration of capital formation are, of course, felt by the under-developed countries themselves, whose populations continue to expand faster than their capacity to produce food and other necessaries. But western European countries are also affected, since the present development may accentuate the adverse trend in their terms of trade."

It was natural in a research document prepared for a European assembly that special stress be laid upon the character of this development to tend towards disequilibrium in the world economy and in the end to endanger progress even in the industrialized regions and, more specifically, in Europe. But quite apart from whether this implication is accepted or not, the plain fact is that we are not seeing in the world today a process of decreasing but of increasing the production gap between the developed and the under-developed regions of the world.

The success of a health programme is entirely dependent upon whether it is integrated into a social process of general economic development or applied to a status of economic stagnation. It is true that an improved health standard will imply both a more favourable age structure of the population with a larger part of it in the productive ages and, in every age-group, a people more able and even more willing to work and to work well. This by itself tends to raise productivity. It is also true that, according to the principle of cumulative causation which I have already referred to, an improved health standard will per se always tend to improve all other component factors in the plane of living. But the actual size of these supporting reactions through the entire social system will be a function of, among others things, the general economic development. And in the case where health reforms provide the primary factor of social change, we must consider the direct effect on labour productivity, production, and consumption of an increased net growth of the population.

The economic value of preventing premature death, to take the simplest case, depends entirely upon whether such an economic development is under way which ensures productive work for the greater number of people we thus keep alive. If the economic situation is stagnant and remains substantially as it was and is in large regions of the world where people live in overcrowded conditions on maltreated land under primitive cultivation, the health reforms serve, from an economic point of view, only to speed up a process towards increased relative over-population and aggravated pauperization. If, on the other hand, an economic development, rapid enough, can be engendered at the same time—which assumes that the region is not too barren in natural resources—the more favourable age composition of the more rapidly growing population will work itself out as an additional cause of higher economic well-being. And again, in both

cases, the process downwards or upwards will be pushed further ahead by cumulative causation.

It is thus evident that the economic value of saving people from sickness, disability, and premature death cannot be scientifically calculated except within a framework of definite and realistic assumptions in regard to economic development. Figures calculated without such a framework are worthless.

I think it is urgently important that the problem of over-population be unequivocally and bluntly conceived and stated in these dynamic terms of social change. There is no such thing as " over-population " in an absolute sense, i.e., independent of the direction and the speed of the development of the economic resources of the population in question. The static notion of a " population optimum " is a faulty way of stating the problem of the relation between population size and productive resources.

For, I would stress, the production resources are not a quantity given and unchangeable. In developed countries, rapidly continuing their industrialization by means of a high investment quota of already large national incomes and pursuing an effective full-employment policy, the productive resources are even a function of population size in the positive sense that a population increase can, and actually does, spur economic development. And, I would also stress, in all countries the development of productive resources is a function of policy.

This point of the crucial role of policy becomes particularly important in regard to the large underdeveloped regions where the general plane of living is substandard and where human beings in hundreds of millions live a culturally isolated and primitive life. There, economic development does definitely not come as an automatic result of population growth. Economic development, if it comes at all, will come as the result of planned and concerted action to spread the application of improved production techniques and to make the natural resources productive.

Such a policy would assume immense efforts and would involve not only very courageous internal reforms of the type I have already indicated, but also very much bigger sacrifices on the part of the developed countries than most of us have yet dared to face. It would assume capital movements to the underdeveloped regions of a magnitude which must seem truly heroic in comparison with the dribbling and trickling of international and national aid and overseas investment which are actually taking place.

I believe it was a most wholesome exercise for inserting a measure of realism into the worldwide, and sometimes rather loose, discussion about economic development in the underdeveloped countries—and, indirectly, of importance for studying the problem of defining and measuring the cost of sickness and the price of health—when the group of economists, appointed by the United Nations to prepare a report on measures for the economic development of underdeveloped countries, took the courage to make a

calculation in which they asked the question : what would be the yearly amount of capital from abroad required in order, first, to meet the present population increase in underdeveloped countries and, secondly, to permit in addition the modest increase of their national income per capita of 2% annually ? The calculation is admittedly of the neck-breaking variety, but it gives an approximation to our understanding of the order of magnitude involved. This turns out to be well in excess of 10 thousand million dollars a year—capital to flow from our developed countries to the underprivileged ones. And the experts point out that the calculation has cautiously been kept on the lower side. A successful health work will tend to increase the amount needed to prevent economic stagnation and increased distress.

While still speaking about the population aspect of the general health problem, I would want also to warn most emphatically against too optimistic a trust in another automatism, namely, that fertility will adjust downwards as mortality is decreased. Quite apart from the immense saving from human suffering, it is apparent that the attainment of a given rate of a population growth at lower levels of both natality and mortality would be an economic saving of very considerable dimensions. It is true that in the highly developed countries the fall in mortality was followed by a fall in natality, which incidentally later on tended to decline much further. But it should be recalled that this happened only slowly. And when it happened, it happened after the attainment of a very much improved plane of living. As I have pointed out, a general improvement in the plane of living is not a necessary consequence of a lower level of mortality in the underdeveloped countries. And it is not even a probable consequence unless, in addition to health reforms, very powerful measures to raise labour productivity are taken at the same time.

It is, indeed, conceivable that it would be possible to induce the spread of rational birth-control in the underdeveloped countries more rapidly and at a lower plane of living—implying also a lower standard of literacy and cultural sophistication generally—than corresponds to the historical process during recent generations in the developed countries. There, birth-control spread so to speak surreptitiously, without the support of public policy, in most cases against it. This could now conceivably be different, and the forces of public approval, education, and legislation be enlisted instead to support the spread of birth-control, where that was necessary to the health and well-being of the individual, the family, and the nation. But again, it would not happen by itself, not without a consistent and very forceful policy directed towards this goal.

Let me now come back to aspects of the problem of defining scientifically and measuring quantitatively the cost of sickness and the value of health. Behind the urge to come to grips with this problem there is our feeling that preventable or curable diseases, disability, and premature death

represent a social " waste ", which should be demonstrated and spelled out in millions and billions of dollars. Only when a public-health programme can be presented as the profitable investment it really is, can we hope that it will be accepted readily and given its due scope in competititon with all other demands on the public purse. To carry out such calculations should at bottom be a straight economic problem. The calculations would give minimum values, as there is always an immeasurable additional net return from health reforms in terms of increased happiness in a society where human sufferings have been mitigated.

Our feeling that a low health standard represents an economic " waste " is supported by everything we know about society. There is a cumulative causation in operation which magnifies the effect of every push upwards of any factor in the plane of living and, of course, also of the health standards. In the end, the cost of raising the plane of living of a population now existing on a sub-standard level will not involve any " real costs " at all for society. This assumes, however, that either that population itself is able and willing to set aside the funds necessary to cover the immediate financial costs and to wait for the returns to mature, or that a part of the funds are advanced on the principle of international solidarity from the world community. Sacrifices for the investment in a better future will have to be made by the smaller and the greater society, and they will result in great " social gains " and, in the end, in actual financial savings.

But this is true only to the extent that the health programme is rationally integrated into a whole system of social, economic, and educational reform. I want to repeat that the maximum effect of a health programme is altogether dependent upon whether, and to what degree, co-ordinated efforts at the same time are set to work in the field of education, food, housing, and, particularly, general economic development. Because of the direct effect of a higher health standard in increasing the rate of population growth, the economic value of health reform is particularly dependent on the speed of economic development. In an economically stagnant society the value might be negative.

A further conclusion to be emphasized is that the economic value of preventive medicine cannot be defined and still less measured, except after a careful study of all the causal relationships between health and everything else in the concrete setting of a particular country, and except on the basis of definite assumptions about policy in all other fields, and particularly the rate of economic progress.

Some in my audience might feel that I have complicated very much what to them, perhaps, may have seemed to be a rather simple problem. In answer, I would want to stress that even if a warning has to be spelled out against calculations without sufficient ground of the economic value of health reforms, there are a great number of intermediary quantities which can be defined and measured without involving the entire complex

of social causation. I am thinking, for instance, of calculations of the varying financial costs of different types of health work, the relative efficacy of preventive versus curative health policies, and, more generally, the effects in terms of life and ability savings—not dollars—of a re-orientation of health work to different illnesses, using different methods of prevention and cure, employing different health administration schemes, and so on.

These and similar problems are all ready to be tackled in a systematic fashion as they present themselves differently in different countries at different levels of general development. They are all of the greatest practical importance in every country for steering health policy in a rational direction. As resources are always scarce, the practical ideal is everywhere to obtain maximum results in terms of health improvement, even if these results cannot be spelled out in terms of dollars in return against dollars in costs. The underdeveloped regions of the world where health conditions are so far from satisfactory are, of course, most intensely in need of the most effective utilization of available resources, and, because of this, they need the most carefully planned health policies.

These intermediary problems can all be studied scientifically, even if the conclusions, without more all-embracing economic and social investigations, cannot be formulated in terms of the general economic value of health programmes. I understand that a very large part of the practical planning work of the World Health Organization is actually directed to these problems. It might be that the Organization could give a further impetus to rationality in health reforms by directing a special effort to elaborating standardized methods for such studies of an intermediary type. To test and improve these standard methods, the Organization might take responsibility for carrying out, in co-operation with interested governments, a number of model studies of some of the problems indicated.

But I would also urge that the more comprehensive studies of health reform in its wider economic and social setting be undertaken earnestly, critically, and persistently. In taking up your time to point out the very wide range of facts and causal relationships in the whole social fabric which will have to be taken into account in calculating the economic value of health reforms, my purpose was not to discourage the undertaking of these broader studies. In my view—to which, in discussions with my colleagues in the United Nations' organizations, I have often given vent—our international organizations have up to now almost missed their opportunity to sponsor the wider, time-consuming, penetrating investigations of the fundamental issues underlying and dominating the practical problems whose surface we are barely scratching.

If today we had to our credit a greater number of really serious basic studies of a solid, forthright, path-breaking type, produced on the level of the highest scientific standards of our time, this would have added very much to our prestige and, more important, to our influence on world

development. It would, I believe, have made possible very much more advanced national and international policies. I am thinking of studies of such a worldwide breadth in their conception and execution that no one learned institution in any one country, nor any single government, could possibly be expected to sponsor them or to undertake them in their full implication.

I have this evening commented upon certain aspects of the scientific study of the measuring of the economic implications of a rational health programme, and I hope I have shown how, if properly carried out, such study branches out to include the widest problems of social change. And nevertheless we have then only touched the fringe of the problems of social science which are raised when we really approach scientifically the causes and effects of industrialization and social progress. These problems need to be approached in the spirit of broadest internationalism and require new associations of scientists from many different fields.

Before I conclude, I would like to add a few more words on what I have suggested is the main condition for successful health reforms : that they be supported by a rapid economic progress.

I have not concealed, and I have not wanted to conceal, that I do not feel over-optimistic about possible great accomplishments in the near future from our efforts to speed progress in the underdeveloped countries. In some of the most populous of these countries the present trend is, as I said, rather downwards, at least in so far as the dominant index of the standard of living is concerned.

My main reason for measured pessimism is a realization of the quantitative proportions between the needs and the efforts and the possibilities. I can well foresee, more specifically, that after ten more years, if we then have succeeded in avoiding the ultimate catastrophe of a major war, a retrospective view would permit the following conclusions. Because there have not been adequate fundamental political, social, administrative, and economic reforms in certain underdeveloped countries, and because, for this and many other reasons, it has not proved feasible to furnish the more rapidly growing populations in many such countries with the means of even preserving their earlier low level of productivity (defined here as average reward for their labour), the population-increasing effects of the international health work done during these ten years have in many densely populated regions had negative results as regards general economic well-being and, in the end, as regards everything else, including even health. In the prevailing world climate of the cold war, the lack of fundamental internal reforms and the frustration of the peoples' hope for progress might, ten years ahead, be seen to have resulted in new political cataclysms; but it is improbable that, at least in the short span, they would have had any other effects on the well-being of the peoples than to increase their distress.

Speaking more generally, I realize fully that already the acceptance of the principle that the richer countries should tax themselves to aid the poorer is revolutionary, more revolutionary than the gradual acceptance some hundred years ago in the developed countries of the principle that the better-situated classes should be taxed for national redistribution purposes. And this new principle has momentum. The international health work will go on. It will most probably even be considerably intensified, because, when we have once accepted the principle of mutually shared responsibility, the urge to cure ills and prevent deaths is an innate and essential element of human decency in our international conscience. In all other branches of our efforts to realize the ideal of international solidarity, work will also continue and gradually gain in strength and purposefulness. Even more considerable amounts of capital might, as time goes on, be made available. But I can now see no reason to expect changes so large that they would materially remove the basis for what I called my measured pessimism.

A friend of mine recently gave me, however, a new definition of an optimist : he is a man who currently reminds himself that the unexpected may happen. Indeed, the unexpected does happen all the time, and it may for once occur in a desirable direction. The present east-west tension and the cold war now warp our minds, distort our national and international economy, immobilize much of the world's resources, and generally prevent us from pursuing fully and realizing our most humane ambitions. This tension may be eased. The *World Economic Report 1950-51*, which has just been published, contains the reflection that should any easing of political tensions in the world bring about any reduction in armament expenditures, the opportunities for raising living standards in both developed and underdeveloped countries would correspondingly improve.

Indeed, if the industrialized regions I mentioned—eastern and western Europe, the USSR, and the United States of America—could feel safe enough to save only 10% of their present armament expenditures, and if they would be prepared to devote this saving to equip the underdeveloped regions with capital, that would about meet the bill calculated by the United Nations' experts to stop the continued pauperization of the underdeveloped regions and would permit an annual rise of 2% in their per capita national income. The redirection by the countries just mentioned of this 10% from unproductive military purposes to productive development abroad would actually imply a ten-times bigger capital inflow than at present to these vast regions and to the aid of these two-thirds of mankind. And it would increase their available capital to three times their present domestic capital formation. Theoretically such a development is entirely feasible.

Seeking reasons for optimism and speaking as I do in the Assembly Hall of the Palais des Nations, which was originally built for the League of Nations, I feel it appropriate to remind you that it was in the Health

Organization of the League of Nations, established only thirty years ago, that the principle of international mutual aid in the field of health was originally developed. Important and co-ordinated work was started not only in health but also in the fields of nutrition and food and housing. Speaking to the Assembly of the League of Nations in 1935, our venerable friend who is now Lord Bruce of Melbourne solemnly declared that now the marriage between health, nutrition, and agriculture should take place. There and then were conceived the two great international organizations, the World Health Organization and the Food and Agriculture Organization, which later were born in the time of the immediate post-war turmoil of international optimism. They have succeeded in surviving and growing in the hard years which followed, and thus we can see the profound continuity of international effort in an evolving world.

The United Nations Educational, Scientific and Cultural Organization was established and is now courageously steering its activity into the field of fundamental education. The International Labour Organisation strives on from pre-war times in its given field of labour standards and relations. The International Bank for Reconstruction and Development and the International Monetary Fund have been created and have already made certain experimental efforts to substitute for the defunct international money and capital market of old times. Under the United Nations, which succeeded the old League, the Departments of Economic and of Social Affairs have been established to serve the Economic and Social Council which, under great political difficulties because of the east-west tension, is approaching its task as an instrument for initiatives for better standards of life. We operate with budgets and personnel resources which, even if they seem to us entirely insufficient for the work with which we are entrusted, have a size which would not have been dreamt of when, in the pre-war era, this Palais was built and the seeds were sown for our organizations. When we feel frustrated in our work and almost mistrust our strength to meet the challenge of our time, we can take encouragement from the immense difference fifteen years have meant, in spite of war and cold war.

And, as for the future, unexpected good things may well happen. At least, it is not for the social scientists to exclude the possibility. After all, history is man-made, not destiny.

REPORT OF TECHNICAL DISCUSSIONS ON THE METHODOLOGY OF HEALTH PROTECTION IN LOCAL AREAS

Preface

Note on procedure

The arrangements for informal discussions on this subject included an introductory meeting under the General Chairman, Professor Ferreira, three group sessions, and a closing general meeting to consider the combined report of the groups. Subsequently the General Chairman presented the findings of the technical discussions to a plenary meeting of the Assembly.

At the first general meeting it was explained that the delegates who had registered their names for the discussion would be divided into five groups, each with its own chairman, rapporteur, and secretary. The list of these names appears at the end of this report. It was agreed that the agenda for all the groups would be identical, but that each group, while considering the subject matter as a whole, should focus its attention on a particular aspect in order to avoid overlapping, and to ensure that all the items of the agenda would be covered.

The principal items of the agenda were as follows :

Survey of local health problems
Organization of local health service
Function and scope of local health service; health workers for local health service
The health centre; and community participation in local health services

At the close of the group discussions, each group approved the matter and form of its report, which was then made available as material for the preparation of the general report submitted below.

Organization

There are many methods—and many have been tried by WHO—of bringing together for informal discussions professional men and women from different countries. The obvious criticism of such a project is that the participants in the discussion have not enough common background of knowledge, tradition, and experience to make their findings noteworthy. It may be said at once that there is no ideal method of organizing such groups, or of arranging the material for discussion. This is, and ought to be, a matter for constant experiment, and indeed the search for uniformity would inevitably end in the blind alley of dullness. In point of fact it has

been found by trial and error that diversity itself—the play of ideas that at first seem incongruous—is stimulating and creative. Members from all countries have something to offer : it may be an illuminating explanation of local difficulties and of ingenious methods devised on the spot to overcome them, or perhaps a system of training staff at a local level that shows itself widely applicable; and there is no country so wise that it cannot learn by the experience of others . . .

The benefit derived from intellectual and social contacts between members in discussion groups is beyond question, but it has been doubted from time to time whether the matter for discussion is not too general to give a satisfactory result. The suggestion has frequently been made that the participants should be grouped in harmony with some common trait or tradition such as language, climate, or level of industrial development. There are, however, serious objections to this procedure : it would tend to defeat one of the principal aims of the World Health Organization; one half of the world would remain in obstinate ignorance of how the other half lives.

There is no ideal pattern either for the subjects to be discussed or for the arrangement of agenda. The general feeling of the groups was that experiments should be continued, especially as this was only the second experiment of the kind. One group suggested, for example, that each discussion group should be as closely knit as possible in language and experience, and that cohesion of groups might be secured by the presence, in a kind of consultant capacity, of individuals from other groups. Again, it has been suggested from time to time that the subjects should not be too wide in scope, as the discussion would become diffuse. This is true; but, on the other hand, the material for discussion ought not to be too narrowly conceived, or a substantial number of the participants would feel a sense of isolation. It is not desirable in discussions of this kind that every member should be an expert in the subject discussed. Such an attitude should be deprecated, except in the expert committees, because the range of discussion would be sadly limited and would lose in freshness what it might gain in precision. One of the most valuable features of the technical discussions which led to this report was the "citizen participation" of the overwhelming majority of the members of every group.

Arrangement of the report

The arrangement of the report follows in general the agenda prepared beforehand by the Director-General. On this occasion five groups met separately, but discussed identical agenda. At the end of the discussions each group prepared its own report and approved its findings. The five reports were then brought together and are now presented as a single document in summary form.

In a document of this kind it would be inappropriate to put forward findings and other material in the form of resolutions, unanimous or otherwise. Such resolutions could not possibly represent the accepted views of those who took part in the technical discussions. Nevertheless, when one considers the diverse backgrounds of the group members, the most remarkable feature of the collected material is the large measure of agreement between the groups on matters of both principle and detail. On the whole this is not surprising, because it has been shown again and again in other human activities that common understanding and agreement are more readily achieved as one gets closer to the ground.

A survey of local health problems in the field must necessarily precede any attempt at organization, or we should attempt to move forward without knowing the terrain and so court disaster. For the purpose of discussion, however, the groups found that it was more logical to start with defining their subject matter. They therefore proceeded to give immediate attention to the description and meaning of " local areas " and then discussed the organization, function, and scope of the services they required. The concept of a health centre and the sphere of its activities were discussed at some length, and some of the groups were able to devote time to considering the principles of staffing and the training of personnel. Finally the broad field of health education was surveyed with special reference to the need for securing community participation. Thus the questions of planning and organizing surveys of local health problems came into a special category as, although placed as the first item of the report, they were discussed mainly on their relation to the future rather than the present.

Survey of Local Health Problems

Types of survey

It was agreed by all that a survey of local health problems is a necessary preliminary to the establishment, development, or radical modification of a local service for health. And it is evident from the discussion that there are many different types of survey, with different aims. The following examples were given :

(*a*) Research survey;

(*b*) Evaluation survey;

(*c*) Total or diagnostic survey. This is a survey made for original planning of community health services or for extension of existing services.

It was upon this last type that discussion was concentrated.

It has been found useful that in the less developed countries, and even in countries where a certain degree of health development has been attained, a survey should be undertaken in two different stages : a pilot study which would limit itself to pointing out the most outstanding health problems

and which might serve only as a rough orientation for further inquiries, and a fuller general survey for which, however, as simple a plan as possible should be devised. Such a survey should embrace geographical data, including the climatological background, and the topography of the area, including roads, railways, waterways, etc., as well as matters specifically related to health.

The main categories of the data that should be secured for the survey could also be classified as follows :

(1) Vital statistics (population and its distribution in the various age-groups; birth-rate, death-rate, infant-mortality rate, and morbidity, particularly from communicable and preventable diseases, if known).

(2) Social and economic status of the population (literacy, schools, agricultural development, cultural pattern of the population, etc.).

(3) environmental sanitation (houses, water-supplies, waste and sewage disposal, food hygiene, etc.).

(4) personal health and medical-care services (hospitals, outpatient services, clinics, and preventive medical services).

Obviously, instead of these four categories, a wider scope can be given—and should be given wherever possible—to the general survey. One method of undertaking a survey, which was discussed in some detail, depends on sending a questionnaire to all health workers and others in the area likely to prove reliable informants; but stress was also laid on the unsuitability of such a method for an underdeveloped area in which health workers and other reliable informants are few and scattered. In such an area many of the vital statistical data are uncertain or lacking, and perhaps the only information available for a survey—information that should preferably be gathered by direct investigation and not through questionnaires—may refer to the crude mortality- and natality-rates, to all data that can be collected in the schools, and to the type and number of houses, as they can be seen during a visit to the place.

Clinical sampling will probably be needed in any thorough general survey to make an accurate assessment of certain special problems. This is true for syphilis and tuberculosis, for example, in all countries; and it will also be essential in some countries for malaria, trypanosomiasis, yellow fever, onchocerciasis, and other endemic tropical diseases.

Survey planning

In order to organize and to plan a survey, we have first of all to specify what we want to know: that is, to make a list of the information needed. Existing forms and questionnaires and plans for surveys seldom have international applicability; an outline of the survey should therefore be prepared beforehand for every particular survey. The organization of

the work should establish how the necessary information should be gathered and, wherever necessary, what particular testings should be made, what authorities and official records should be consulted, what key men should be interviewed; what institutions, centres, etc. should be visited; which schools, houses, and factories. This presupposes that the staff of the health centre have had a balanced training which covers both preventive and curative medicine, otherwise the survey will tend to be biased too heavily towards the problem of medical care. The public-health nurses of the health centre are of particular value in this respect because of the close contact with families, and with mothers of young children, which their work gives them.

In this organization of the survey it should also be determined who is going to carry it out. It seems to be agreed that for elementary health surveys, the local health personnel should take responsibility. For more elaborate surveys, the help might well be obtained from the central service of more highly specialized experts, such as epidemiologists and technicians who, of course, should be assisted by local personnel. The first simple method may well apply to small local health areas : the second would better apply to larger areas, those belonging to the higher plane of local administration (departments, provinces, cantons, etc.). In a country where vital statistics and data on the health of the population are wanting, it may well be that the first survey could be carried out by the staff of a health centre.

In planning the information which the survey should acquire, it must be borne in mind that it is necessary to learn not only what the health problems are, but also what are the resistances in the shape of customs, practices, and beliefs which may impede their solution. This was vividly illustrated in one group by the example of an African tribe who hid their children from the visiting health officer who came to find if any of them were suffering from smallpox. They did so because on a previous occasion the veterinary officer had killed all their cattle which were suffering from foot-and-mouth disease.

Analysis of results

When the survey is completed, the analysis of the results usually requires a higher degree of expert knowledge than the collection of the information; it is here that outside expert assistance may be of value. The survey—at any rate the diagnostic survey which is being discussed—is not an end in itself; it is a preliminary to action. In fact it should not be undertaken unless it is intended to act upon it, since if no action is taken it will merely give rise to public cynicism and increase the difficulty of future health work in the area. But where the survey has been made with a view to action the broad general lines of its findings should be communicated

to those who carried it out, and to the community which was surveyed. Thus the survey itself gains an additional value as a means of public education in health.

Those groups which discussed the survey felt it necessary also to consider some of the principles of programme policy which should be reviewed when action on the survey's findings is planned.

Priority of subjects

It was felt that the less developed a country, the more will it be found expedient, if not necessary, to give priority to communicable-diseases control, environmental sanitation, and nutrition. The more widespread a disease is, the more deaths and morbidity it causes, the easier it is to control, the higher should be its priority in the programme derived from the survey. It is very important that the health service should have obvious success in solving problems in the earlier stages of its programme, particularly if that success also influences social and economic factors. In this way an impetus may be given to the "cumulative causation" which starts a general development in the social, economic, and health status of a community.

In many countries it has been found that the control of some endemic diseases like malaria, yaws, and hookworm, and the drive against infant and maternal mortality, have been the activities which are the most important in the light of the survey findings. Improvements in environmental sanitation, as regards intestinal diseases particularly, must also receive high priority although it must be recognized that they do not achieve the dramatic results nor the same enthusiastic recognition of their value by the population, which results from a campaign against yaws or malaria. In more-developed countries, however, where intestinal infections are still a problem, it may well be that a local health service will succeed in eliciting the factors to which persistence of typhoid infections is due, and the appropriate improvements in sanitation which may annihilate them. In such a case, environmental-sanitation improvements should probably have the highest priority. In higher stages of development, when the communicable-diseases control has already reached a high level of efficiency, when maternal and child health are properly cared for, then the results of the survey might well stress the importance of other subjects in which improvement is needed for health promotion. Emphasis may then be given to nutrition, mental hygiene, facilitating medical care for larger sections of the population, geriatrics, and chronic diseases. At this stage it may still be necessary to ameliorate environmental sanitation and it is only the health survey of local areas which might disclose that, even in highly developed countries, there are rural areas where environmental sanitation is at a far from satisfactory level.

Even though a survey will always indicate problems to which the programme should give special attention, there should not be exclusive concentration of public-health work on these problems. They should be points of emphasis in a general public-health programme. Success in the control of a specific disease should lead the way to public-health work in other fields. The organization, practices, and staff, therefore, that are developed to control this specific disease should not be specialized in any restricted manner to that particular problem but should from the outset be capable of developing a general public-health programme.

Organization of Local Health Services

Definition of local area

At the outset of the discussions, the groups felt that the expression " local area " ought to be defined, or at least described with some precision. It was clear that a simple population basis would show enormous variations according to the concentration of houses and many other factors; and that an attempt to create purely geographical boundaries would meet with a similar fate, although in this case ease of communication was more important than mileage. Another factor of some difficulty emerged in the attempt at definition of the term " local health area " which had also different meanings for members from different regions, depending on the course of social and medical development. It was considered also that the size of the areas would be dependent to a considerable extent on the scope of services rendered. A local area defined for clinical purposes, for example, would include a very small population; and one for epidemiological purposes, because of considerations of communications and travel, might necessarily have to cover a larger area and a bigger population. At the close of their deliberations, one group agreed on the following definition :

" A local health area is the smallest area in which are provided the minimum basic services." [16]

Unit of service

The second way of noting the constitution of a local area was to examine what might be described as the unit of service. This is considered in some detail in the section entitled " Function and scope of local health services ", but the immediate point which emerged in discussion was a sharp difference between urban and rural areas. In the urban areas there might be a com-

[16] Another discussion group offered a similar definition :

" A local area is the smallest administrative unit of a country having definite responsibilities for rendering direct health services to the people."

mon denominator in the number of population to be covered. If that exceeded twenty thousand, then it would be too great for a general health service, and specialized services would need to be introduced. In rural zones, on the other hand, it was not possible to devise even approximate figures. It was agreed, however, that the unit of service should be general and that specialized activities such as elective surgery should be reserved for larger centres comprising a number of local units. It was pointed out that at the rural level, that is for a small village, it was impossible, owing to lack of personnel, to give adequate treatment for a large range of diseases, but that this could be accomplished at a higher level by using a staff of specialists at a combined health centre. Such a centre could serve a number of local units by organizing travelling teams of specialists. It was interesting to note that while no other speciality was regarded as appropriate to the smallest local unit, it was felt that the services for mothers and children could be so decentralized. Another group pointed out that, while the local health area constitutes the smallest division of basic health services, the work of these units might be decentralized and extended by the use of mobile dispensaries and by field units which operated from a larger centre as a base. Examples of this type were truck units, travelling dental services, travelling teams rendering radiological or laboratory services, and, in one case, an aeroplane unit.

Boundaries

It was pointed out that there may be advantages in making the boundaries of local health areas coincide with political boundaries, so as to bring them under the corresponding administrative and fiscal jurisdiction. It was frequently stressed that the local health area should be a functional unit and not a geographical district.

Area planning

Since the very beginning of public-health services there has been endless controversy about whether the preventive and the curative services should cover separate areas (see section entitled " Function and scope of local health services "). Many members took up this question in relation to the social and economic needs of the people. It was felt that in the less developed areas where the population had not had the advantages of much education and were exposed to the urgency of the great epidemic diseases, the smallest local area ought to deal with both medical care and prevention. This was necessary not only as a policy but also because of the scarcity of medical and nursing personnel. It seemed, however, that when a country had gone forward to highly complex public-health administration there should be an increasing degree of separation between the two main functions

of prevention and treatment. This separation also applies as one moves from the circumference towards the centres of industry and population.

Mention was also made of a number of systems representing all variations between extremes. At the one end of the scale the municipal medical practitioner (known since the days of the Roman Empire), paid by the local authority to give medical care to the needy, is also part-time officer of health; at the other end stands the experimental health centre of the highly developed type where all national and local health services merge with the services for medical care of the population. This can be seen, for example, at some centres in Chile where medical care, social insurance, and maternal and child health are combined in a single service, and this is the development envisaged in the National Health Service of the United Kingdom of Great Britain and Northern Ireland (see section on " The health centre "). Whatever might be said of the larger centres it was clear to the groups that fusion of preventive services and medical care should be the rule at the local level, especially in scattered rural areas. It is important, however, that the local area should be regarded as part of a whole in order that full consideration be given to preventive as well as curative services. Policies implemented in local areas should always be compatible with the larger schemes promoted at the centre or regional level so that, for example, when development brings about water-supply schemes on a large scale, there will be no difficulty in securing integration at the periphery.

To sum up on the question of areas, the general view in the discussions was that it was desirable, in attempting to define sizes of area and service, not to go down to the lowest possible limit (a single officer or a group of semi-trained assistants) but rather to consider the staffing and service of an " ideal " unit for the less developed and more remote areas and as a base for those that were more fully organized.

Staffing : problems in relation to areas

In many discussions on planning to meet social and economic needs, the main factor that emerged was the lack of personnel to look after the smaller areas. It was agreed that the best arrangement was for each area to make the best possible use of its resources, but that the aim should be the more fully developed local health unit such as that referred to by Professor Winslow in his address.[17] Health services are a compromise between needs and resources. The staff of a local health organization, it was pointed out, depended upon a great many complex factors, including the economic and social development of the area, the degree of support from higher or more specialized health centres, and the functions which the local health organization is required to discharge.

[17] See page 191.

The basic services in an area

The method of organizing a system of local health services to meet the social and economic needs of the locality was then discussed in these terms. Many members took the view that environmental sanitation was the basic service, and here again emphasis was laid on the shortage of trained personnel as the main limiting factor in the programme. If there were enough trained staff, the problem of providing adequate environmental services in local areas would be much less serious. Most countries have in fact some trained staff, and the question is how to make the best use of local semi-trained people on the understanding that all environmental sanitary work would be under the guidance of fully trained staff at an appropriate centre. It was regarded as essential that there should be centralized planning and supervision and that these environmental services in local areas should not be developed in isolation but as part of a broad general policy. At the higher levels it would be necessary to establish some authority which would carry out the scientific planning and analyses of the sanitary problems, even when the actual work was entrusted to local men trained perhaps for a short period at some centre. All local areas should have some sanitary staff no matter how inadequate their training, provided that supervision from above was really effective. In this way alone would there be a consistent development of sanitary-engineering facilities, good inspection, control of vectors, and sanitary health education. As regards other staff, it was clear that the nurse with public-health training was the key member of the local service unit. Some speakers, in reference to areas where trained professional staff was extremely scarce, illustrated their remarks by referring to schemes under which health services and medical care were brought to the villages and entrusted to local inhabitants, trained for a few months as assistant nurses. Thus in each village there was a small unit with these assistant nurses to look after maternal and child health, the health education of the people, and, within narrow limits, environmental sanitation. In association with these was a larger centre where trained technical staff could make clinical or microscopical diagnoses of the most common diseases prevailing in the country, e.g., malaria, helminthiasis, yaws, and leprosy, and could treat these conditions in cases of emergency until they were able to bring their patients to the doctor at the time of his weekly visit. An organization of this kind was a realistic attempt to solve a difficult problem and it had the advantage that it brought the local health service into immediate contact with the people. At the next level above this it was often useful and necessary to employ technically trained assistants, and only at the highest levels (say with a population of 100,000) was it necessary to employ a health officer on a full-time basis with a staff including a sanitary inspector to supervise and direct all the environmental-sanitation work at the health centres and a fully-trained public-health nurse to organize maternity and child welfare work. At that level also stood the hospital

with its physicians, specialists, and laboratory technicians to serve as a centre for diagnosis and specialized treatment. These arrangements apply of course to the more difficult and remote areas where trained personnel is almost impossible to secure. At the other end of the scale, that is, in highly developed areas, the local health centre, even in rural areas, would provide for a full range of staff including, in addition to physicians, nurses, and other professional workers, provision for organizing statistical work, radiological services, housing, and education.

Financial arrangements

The financial side of the local health services varies from country to country and is dependent on the local needs and on the social and economic conditions of the population served. In some countries the local areas are financed by the government itself and in others by municipalities and even by private institutions. The groups felt that a careful watch should be maintained to make sure that funds were distributed fairly between the higher and lower levels of health administration. In several groups there was a good deal of discussion on the right methods of providing funds—whether by block payments, percentage grants, or some form of ad hoc provision. The general feeling was in favour of some form of block grant subject to supervision from the centre or region over the expenditure by local units. The percentage grant did not find favour as it was held to be a check on initiative. In many countries both highly developed and in the early stages of development, strong financial support was needed from the higher governmental units. Some members considered that, while the curative aspects of medicine might well be financed by the individuals concerned, the cost of financing preventive measures, at any rate, should not be directly related to the services rendered. It was understood that in most cases the governments played a large part in financing local expenditure on public health and in exercising supervision over the services rendered. It was agreed that where preventive medical services were carried out by voluntary organizations, the work should be supervised by the government. It was expressed as a principle that wherever possible the cost of health services should be shared between the local health authorities and the government. Although the principle was apt to lead to administrative complications, its practice has in fact prevented the abuse of funds from governmental sources, since the local authority, being an elected body, has to accept responsibility to its own rate-payers for its share. When the source of grant is too remote, the sense of responsibility is correspondingly removed.

Appraisal of health services

This difficult subject was briefly considered, but many members felt that it belonged rather under the heading of surveys. One group advised

that the evaluation of the health services in an area should be based on two methods : the actual records of their activities and the results achieved as shown by vital statistics, e.g., a reduction of mortality. It was pointed out that the infant-mortality rate is a sensitive index of health conditions. The process of interpretation was, of course, a function of a higher authority in order that one area could fairly be compared with another. Appraisal by inspection by an authority should take into account all the elements of the programme, not merely the review of the facilities provided, but also an examination of records and reports.

Function and Scope of Local Health Services

Meaning of " health protection "

In the course of a general discussion, the definition of " health protection " acceptable to one group was expressed as follows : " Local health protection consists of all activities for the promotion of health, happiness, and well-being of the people ". It was widely agreed that health protection should be considered in its broadest aspects, and another group prepared this descriptive definition which was generally agreed : " Health protection means providing conditions for a normal mental and physical functioning of the human being, individually and in relation to society. It includes the promotion of health, the prevention of sickness, and curative and rehabilitative medicine in all their aspects." It was fully recognized that public-health services did not constitute an isolated field of activity, but were intimately related to the social and economic problems of the area. Under the general heading of health protection, the view was widely expressed that in some areas of the world veterinary services were as important to human health as they were for agriculture and animal nutrition.

An attempt was made to differentiate between the services to which an individual would have direct access and those which would be provided only indirectly through laboratory and other specialized services. There was general agreement on the requirements of the ideal health unit as described in the section dealing with the organization of local health services. Some members of groups mentioned that, among the specific categories of services to be included in remote local areas, a medical relief centre or dispensary where urgent treatment could be given was indispensable and that it should, where possible, be provided with a small number of beds for temporary care, including care given pending the arrival of a doctor. Difficulties of transport, the structure of such remote communities, and the low economic status of the people made the provision of this kind of service an essential contribution to health.

Specialized health and medical services for local areas

In addition to the minimum basic services agreed upon, the groups considered what specialized services ought to be brought to the local

districts, and among them were listed veterinary services, and the examination of food, public abattoirs, and food-handling establishments. Certain aspects of environmental sanitation such as the control of water-supplies and sewage-disposal systems were deemed to be specialized services but not as a rule practicable by a local unit. The medical specialities within the sphere of public health, such as malariology, the control of tuberculosis, and mental hygiene, ought also to be applied in local areas but have to be provided on a wider basis. In certain parts of the world the local services of an ophthalmologist were important. So far as the curative side of health services was concerned, transport facilities for moving sick patients to hospital accommodation where specialist care could be provided was an important service. The development of rehabilitation of the sick and injured and the care of handicapped children were also regarded as a local service although organized from a convenient centre of population.

The relationship between the local health service and the provincial, regional, or national health administration ought to be defined in terms of (*a*) authority, (*b*) responsibility, and (*c*) initiative. It was felt that in all three of these relationships as much freedom as possible should be left to the local unit, although it was admitted that in certain remote and underdeveloped areas the local people were not as yet ready or sufficiently well educated to accept such responsibility. In these cases a certain amount of direction from the central authorities was still necessary. It was one of the functions of the higher echelons of public-health administration to develop in local units that feeling of responsibility and initiative and to assist in their development by providing funds for education and services.

Combination of preventive and curative medicine

One of the first issues to appear in the discussion of this subject was whether both preventive and curative aspects of medicine should be included in the category of local health services. In some countries which have enjoyed a high level of medical service for many years, the historical development has been first in the direction of curative medicine, with the growth of preventive services taking place later, and separately. Thus medical services have become canalized into two separate, though related, movements. This has not been the case in underdeveloped areas, however, and there it may be possible to achieve an integrated development; in fact there is evidence that this is taking place. Opposing views were expressed as to which service should come first. Some opinions held that the confidence of the people could be gained through treatment and cure and that a preventive programme could be built on the foundation of that trust. Other opinions were based on the experience of successful campaigns for the control of yaws and malaria, opening the way for fully-rounded programmes of prevention.

The advantage of a close correlation between the curative and preventive elements of the health programme was particularly stressed by many. The relationship would vary according to social and economic conditions and might require different and changing emphasis. In rural areas there was a tendency towards a combination of preventive and curative programmes in a single unit, which led to greater economy and higher efficiency. In densely populated communities, on the other hand, there was a movement toward greater specialization and the separation of specialized units.

It was suggested that social services should be included as a part of the health programme. However, this point of view was overruled on the grounds that although there is a close connexion between social services and health services, with special reference to mental health and the control of alcoholism, for example, the health programme should not be broadened to include the whole range of social activities. The health programme should be an essential element of a general programme, leading to both physical and social well-being.

The education of the doctor in the dual aspects of preventive and curative medicine was stressed, and it was held that a doctor who was engaged in treatment only was only half a doctor. This was especially true in a rural health situation, where the doctor in charge had to perform both types of services.

The specific categories of service which should be included in the local health services were also considered. One approach to this problem was the examination of the needs of the individual from conception till death, considering the different stages of his development. There would be needed, of course, programmes of pre-natal care and maternal and child health, school health programmes, industrial medical services, and sanitation and health-education programmes, in addition to general medical and nursing care. The opinion was expressed that certificates of health before marriage and routine examination of pregnant women were essential. Throughout this programme, emergency medical care was considered necessary at a local level, with the support of specialized services from technical centres in the fields of both preventive and curative medicine. Other categories of services to be supplied at the local level were simple laboratory services and vaccination centres. The question of providing for blood transfusion and dried plasma was raised, and some of the technical difficulties which might be expected in such services were discussed.

In defining the scope of local health services, it was pointed out that a sound programme should include not only elementary medical care, the prevention of communicable disease, nursing, improved environmental sanitation, and health education, but also elements of oral hygiene, the dental aspect of preventive medicine, the protection of workers in different industrial work, and the education of individuals about the possible hazards of their environment. Information on all aspects of preventive and curative

medicine gathered by these local centres should be passed on to the central government. It was pointed out that the health services should be adapted to the existing conditions of disease and disease hazards in the different regions, as, for example, a programme for control of bilharziasis in Egypt.

To meet the local needs, it was proposed that the following services should be included in a large health centre :

(1) Dispensary for care of walking patients, with small laboratory.
(2) Hospitalization for inpatients and surgical cases, with an isolation ward.
(3) Maternity ward.
(4) Pre-natal and post-natal care.
(5) Ambulance service.
(6) Specialities appropriate to the predominant endemic and epidemic diseases of the region.
(7) Sanitary and school inspection services.
(8) Vital statistics.
(9) Epidemiological-notification services.
(10) Vaccination services.
(11) Mental hygiene services.

On the question of the relation of the local health service to the national, provincial, or regional health administration, there was discussion of what was termed " the hierarchical system of health services ". Typical of this system was the organization of French medical services, which provided for complete hospital service to serve a population of from 30,000 to 40,000. A population of this size could support a complete range of laboratories, and hospital and specialized services. At the other extreme, a simple maternal and child health centre without hospitalization could be supported by a population of perhaps 8,000. A small centre of this sort would, of course, need to rely on outside facilities for specialized services such as serological tests, detection of tuberculosis, and other similar functions.

As an illustration of the need for the support of local health programmes by large hospital centres, the group considered the problem of mass population screening for tuberculosis. Such a mass screening was regarded as futile unless a considerable number of beds was provided before such campaigns were undertaken. If the positive cases found could not be provided for, the whole preventive campaign might be discredited.

Although minimum services, as set out, were necessary in each health area, other services were frequently desirable, and consideration should be given in each case to the possibility of extending the existing local health services to sub-areas. On the other hand, as local development progressed, there might be a possibility of adding to smaller areas some of the specialized services which are ordinarily supplied from a higher centre.

Health Workers for Local Health Services

Categories of health workers for a local service

Discussion of the categories of health workers needed in local health areas began quite naturally with consideration of the physician, and continued with references to the midwife and the public-health nurse. It was felt that in some areas the work of these two women could be combined to advantage. The midwife tends to get closer to the population than the public-health nurse, and combination of the two is therefore a gain from the point of view of education of the public. In some areas, the public-health nurse might deputize for a physician, but, in general, whatever she was doing should be supervised and directed by a physician. One of her functions should be the teaching of auxiliaries and midwife-aides, and of the public in health matters.

Sanitarians were also regarded as essential components of the team. They need not necessarily be sanitary engineers; indeed, the small number of trained sanitary engineers at present available in the world precluded this possibility. In most areas, the sanitary inspector would have to do the routine work, the engineer being called in from a central administration only in case of difficulty.

A large class of health workers might be grouped as technicians. This term would include laboratory technicians, health visitors, disinfestation staff, and vaccinators. Provision must also be made for trained clerical staff. At least one participant thought that a veterinary surgeon was an essential member of the local health service.

For larger units, specialists would be required in ophthalmology, tuberculosis, malaria, dentistry, mental hygiene, and perhaps nutrition. Specialists in health education would also be needed in large units; in the smaller units, their function would be distributed among the physicians, nurses, and sanitarians.

The question of voluntary workers presented some difficulty. There was a place for them in local health services, but they should not be given a regular place on local staff, mainly because of the difficulty of supervising them.

It was not easy to come to a decision about pharmaceutical staff. There were four possibilities for dispensing drugs in areas without a good supply of trained pharmacists : (1) a pharmacy could be opened in the local health centre; (2) dispensing might be done by a local physician, or in a larger centre by a pharmacist; (3) nurses might be permittted to dispense standard prescriptions; (4) a small pharmacy might be opened in a general store.

The great variations in the pattern of the health team in different countries were felt to be mainly due to the stage of development reached in an area. In any case, the fact must be faced that for a long time medical auxiliaries would have to replace professional personnel in many areas.

Training of personnel

The training of personnel was also discussed. This had, of course, two aspects : (1) training within the area; (2) preparation outside the area for local work.

Particular stress was laid on rural health centres, which might with advantage be exploited for training purposes in the same way as hospitals. There was, however, a difference of opinion on the suitability of health centres for personnel training in general. The argument for it was that it was an economical method in countries with limited financial resources. The argument against was that it was not a particularly efficient technique. In any case, it must not be considered that local personnel were there primarily to teach. The great advantage lay in training persons for work in their own area, where they would be accepted more readily than strangers from a different cultural milieu. Some areas may not be ready to accept the teamwork concept in training, but this is an ideal to be aimed at.

The training of general physicians in public health was debated. There were two schools of thought. One considered that all medical students should be instructed in the groundwork of preventive medicine, such as vital statistics, epidemiology, and prophylactic measures, while the other thought that this might not be necessary in all areas. In any case, physicians would be helped greatly in their work in local areas by training in human relationships and instruction on the mental and emotional life of individuals. Although postgraduate training in public health was clearly a necessary activity, it was felt that it was of secondary importance for local work in underdeveloped countries.

The point at which the nurse should receive her public-health training was also debated. There were two possibilities. She might receive it as part of her basic training or be given it after graduation. The former course was generally favoured.

In addition to training for their essential primary qualification, sanitary engineers should have a broad biological education to fit them for co-operation with other health workers.

A career in local health work

Attraction of personnel into local health work was discussed at length, and the keen competition between preventive and curative services for the limited number of physicians and nurses available. The fact that public-health workers, especially physicians, were badly paid all the world over meant that curative services were greatly advantaged in this competition. The effort to restore the balance should begin in medical and nursing schools, or even earlier, when teachers should try to direct attention to the need and scope for workers in preventive medicine. To include some clinical medicine in the public-health physician's work might prove an

attraction. This, of course, would be reversing a recent trend in some countries, in which clinical work in communicable disease has been taken out of the hands of the public-health physician. Where health centres existed, an effort might be made to provide accommodation for physicians and their families, especially in rural areas. Greater security of tenure of appointments, and good pension schemes, could be used as inducements. Care should be taken to give personnel as much responsibility as they deserved. It was also important to raise the social status of staff as representatives of the national or local government. Adequate technical facilities and funds should be made available for local health work, and the stimulus of suitable contacts with those working at higher levels in the health administration should be present. Exchange of information between well-developed and underdeveloped countries is favoured. Finally, a study of the reasons why persons choose certain careers might help in solving the problems of staffing local health services.

The Health Centre

Definition of a health centre

As was expected, the question of health centres received much attention. There was an obvious need to define a health centre. The simplest definition proposed was " a place where the health services of a community are given or administered ". Another group defined it as " an institution covering all health action within a given health area ". Several participants wished to aim at greater precision. Thus it was defined as " a unit providing the basic functions of curative and preventive medicine and hygiene necessary for the majority of the local population "; to this one member wished to add " either directly or in relation to other services ". A further suggestion was that it should be situated at the most suitable point in a local area compatible with its efficient operation. The centre must not be regarded as a geographical unit but as a functional entity.

One group wished to recognize three types of health centre : (1) the centre forming part of a local health unit; (2) the centre forming the actual unit; (3) the diagnostic centre serving several units. It was realized, however, that to most persons a health centre meant either the first or the second. The health centre might, of course, simply be a part of a community centre.

The question was raised whether such centres are desirable or necessary for the efficient operation of local health services, since some countries with excellent health services had found no need for them. The consensus was that health centres in one form or another were an effective instrument in health services. In less-developed countries they might arise in response to a need for provision of previously non-existent medical services; in

more-developed countries they might be desired by the medical profession as a means of increasing the efficiency of services already rendered to the public.

The need was repeatedly stressed for keeping the idea of a health centre flexible. A health centre is a place, and its structure must suit local conditions and requirements. Its design would be entirely different in well-developed and underdeveloped areas. A centre suitable for a rural area might be the simplest possible building, such as a room in a cottage; and it might well be provided by voluntary effort. In more populous districts the centre might owe its existence to a desire to fill in gaps in an already reasonably good health scheme.

Functions

It follows that the functions assigned to a health centre must also vary from country to country and from area to area. Three questions were raised : (1) should the centre work only in the field of preventive medicine; (2) should medical care also be given; (3) should that medical care include the care of inpatients ? Here there was a division of opinion. The argument against including medical care was that it complicated administration unduly. On the other hand, public interest could be aroused more readily if medical aid were obtainable at a health centre. The pill of preventive medicine must be covered with a sugar coating of medical care, even though the pill was in the long run the more important constituent. Indeed, experience had shown that attempts to minimize curative functions might fail. Perhaps it would be best to state that preventive and curative medicine should go hand in hand, emphasis being put on one or the other according to local needs. The danger was, of course, that inadequate stress would be put on the preventive side. Some group members were in favour of integrating local hospitals administratively with health centres. This would, however, complicate matters greatly and throw a heavy responsibility on the medical officer in charge of the combined unit. On the whole, it was felt that close co-operation between hospital and health centre without rivalry, and a unified control from a higher level, were the ideals at which to aim.

The basic functions of a health centre, regardless of its situation, were then listed. They were considered to include :

Maternal and child welfare	Health education of the public
Communicable-disease control	Keeping of statistical records
Environmental sanitation	In-service training of personnel
Housing control	Medical care (to an extent varying
Public-health nursing	with the needs of the area).

Other functions which it would not be unreasonable to allocate to a centre were provision of laboratory, dental, and school-health services and consultations on mental hygiene.

The ideal size of population or geographical area to be served by a health centre was discussed. It was concluded that no single figure for population or area could possibly be laid down. The limiting factors were the nature of communications in the locality, rather than absolute density of population alone, and of course the number of personnel provided. In other words, a centre should be designed to serve that population which could conveniently reach it.

Essential staff

In the discussions on staffing of health centres, it soon became apparent that there were three different concepts of staffing. First, there was the minimum staff without which a health centre could not be operated. Secondly, there was the ideal staff which the group would have liked to see present in every centre—the goal towards which every country setting up health centres should strive. Thirdly, there was the staff which it would be possible to provide within the near future, having regard to resources. Two plans were suggested for the minimum staff : an all-specialist staff; and a " general utility " staff, capable of performing a wide variety of tasks. The former plan might be suitable for well-developed countries; the latter would certainly have a wider appeal in underdeveloped areas. The following scheme was suggested as a minimum :

(1) Doctor—medical care, prevention of communicable diseases, and policy regarding sanitation.

(2) Public-health nurse and midwife—maternal and child health.

(3) Technicians (work under supervision of the doctor)—sanitation techniques, immunizations and vaccinations, attention to water-supplies.

The ideal was felt by one group to consist of a physician at the head with public-health training and experience, assisted by public-health nurses, a sanitary engineer, clinical staff for treatment, and office staff, including a qualified secretary.

It was clear, however, that this ideal must in many countries be departed from, and that even the basic scheme could not always be adhered to. The case of the public-health nurse was referred to : in some parts of the world, nurses either did not exist or were so few that all were required for curative work. To a lesser extent, this was also true of physicians. Individuals with public-health training might not be available, and local general practitioners might have to staff the centres instead.

It was not possible to go into much detail about construction and equipment of health centres. There would obviously be the greatest variation in these matters, but it was important to realize that it was more satisfactory to have a badly equipped centre in temporary quarters than to have

an ideal centre existing only on paper. Provision should be made if possible for expansion into a community centre.

Community Participation in Local Health Services

The need for community participation

There was general agreement that community participation in some form is essential to effective operation of local health services. The people must be given certain responsibilities for the health programme. These responsibilities may be different in rural areas from those that can be given to them in urban areas. This is one example of the importance of understanding local and national, social and cultural patterns in relation to the successful prosecution of public-health programmes. It was recognized by all groups, but unfortunately the matter was not explored by any.

Community participation was interpreted in several ways. Two basic types seem to exist—those in which voluntary associations are formed in order to meet specific health goals, and in which the activities are subsequently taken over by the government; and those stimulated by the government in order to develop an efficient public-health service. In the latter case, though the initial stimulation comes from the government, genuine community participation rather than docile acceptance must be the aim. One method of obtaining this participation in programmes stimulated by a government depends upon the identification of the "natural" leaders of the local community and their instruction in elemental health and hygiene problems.

But it is apparent that we need to know much more about how this citizen participation can be obtained. Methods that were described included local Red Cross societies organized by citizens, the use of volunteers in hospitals, child-health clinics and other health-centre activities, and local organizations of citizens to promote local health services and to participate in their administration and direction. In some countries citizens' groups have been responsible for developing and administering home nursing, midwifery, and systems for financing medical care. Many of the most famous hospitals in the world arose from the devoted activities of individual citizens. But in some of the examples which the groups have quoted, citizen participation appears to have been a makeshift to overcome deficiencies which it was hoped were temporary, rather than something to be encouraged in its own right. The history of some highly developed countries suggests in fact that, on many occasions, it was groups of citizens who gave leadership to a laggard government. This experience may, in fact, not be directly relevant to the present situation in an underdeveloped country where leadership may lie in the health authority, and where that authority has the problem of evoking active participation from an ignorant or apathetic population.

Voluntary help and State control

In well-developed countries we have often seen activities started by groups of citizens spread until they were assumed as a State responsibility with a consequent diminution of the participation and interest of the local community. In the underdeveloped country perhaps the opposite should be our aim. Perhaps the government should take the lead in developing activities, and community participation in them, in such a manner that the local community can take over the local responsibility for the activity, leaving to the higher health authority the co-ordination, supervision, and planning which affects all local communities and therefore cannot be undertaken by any one of them individually. One thing is clear : there is no generally correct solution. The well-developed countries may have more to learn on this matter from some of the experiments which are beginning in the underdeveloped countries than the latter can learn from the history of the development and practices of public-health work in western Europe and North America.

We need further discussion too on what we mean by citizen participation. Do we mean the women who helps to weigh babies at the local clinic, the villagers who dig a new well with the technical advice of the local sanitary officer, or the men and women who sit on the politically appointed health committee of a large area and vote on resolutions concerning programme and budget ? Each country, clearly, must decide for itself what kind of citizen participation it needs and how to get it.

Education of the public in health

Health education of the public was a subject which was considered in several groups when they discussed the question of citizen participation. It was agreed that health education is an essential function of local health services, and that without it community participation could not become fully effective. Most participants agreed that, regardless of who carried out health-education activities, some special training in the necessary techniques was desirable. Opinion as to who should carry out health education ranged from the point of view that it is a function of all public-health personnel to the point of view that it is a function of a specially trained health-education staff. In the latter case, some felt that highly trained individuals could do local work; others felt that they should train and give leadership to a group of workers familiar with local customs and mores.

Even if it is admitted that, ideally, public-health education is a function of all health workers, it must be recognized that when its development is not the primary responsibility of some individual with appropriate training it is, in practice, usually neglected. Public-health education cannot successfully be treated as a by-product of other health services.

It was generally recognized that the public-health nurse should play an important role in health education; but it was pointed out that in order to carry out this task more effectively, the nurse needs much greater official recognition of this aspect of her work, more time in which to do it, and specialized training in the necessary techniques.

The view was also expressed that education should be carried out by general public-health workers rather than by those who are specially interested in single programmes, such as control of tuberculosis or venereal diseases. But public-health workers are not the only persons who have a responsibility in this matter. Several groups pointed out the opportunity for health education which schools provide. If this opportunity is to be taken, then training in the methods and aims of health education must be given to schoolteachers and, here again, the methods which the teacher should employ must be adapted to the conditions and needs of the locality.

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Biographical Note

THE HON. JUAN SALCEDO

President of the Fifth World Health Assembly

The Hon. Juan Salcedo was born at Pasay City, Philippines, on 23 September 1904. He began his medical studies at the University of the Philippines in 1922 and seven years later obtained his medical doctorate. Appointment to the post of Assistant Professor of Biochemistry at the University of the Philippines in 1939 brought the opportunity for postgraduate study in the USA, first as a Fellow of his own university and later as a William J. Gies Fellow of Columbia University. Courses in biochemistry, chemistry, endocrinology, nutrition, and public health at the University of Chicago (1941-2), Johns Hopkins University (1942), and Columbia University (1942-4) led to his obtaining the degree of Master of Arts at the last-mentioned university in 1944.

Public health and nutrition have been the main interests of Dr. Salcedo's career. As Director of Public Welfare for the Philippine Government in 1945, Executive Officer of the Philippine Relief and Rehabilitation Administration from 1945 to 1947, and Director of Field Operations of the US Public Health Service in the Philippines from 1947 to 1950, Dr. Salcedo has played an all-important role in the development and administration of relief measures for the aged and the destitute in the Philippines, and in particular in helping in the rehabilitation of war victims. He was Director of Nutrition in the Philippines from 1948 to 1950, and is at present Secretary of Health to the Philippine Government.

Dr. Salcedo has also had extensive experience in the work of international organizations. Official representative of the President of the Philippines to the United Nations Relief and Rehabilitation Administration (UNRRA) from August 1945 to January 1947, he acted as adviser to the Philippine delegation at UNRRA conferences in 1944, 1946, and 1947. In 1949, he was a member of the Philippine delegation to the Fifth Session of the Conference of the Food and Agriculture Organization (FAO), and in 1948 and 1950 attended meetings of the FAO Nutrition Committee for South and East Asia. His association with WHO dates from October 1949, when he attended the first session of the Joint FAO/WHO Expert Committee on Nutrition.

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[19] Title changed to Council for International Organizations of Medical Sciences (CIOMS) at the Second General Assembly of the Council, April 1952.

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